



The PHOTO LITHOGRAPHER

Semi-Annual
EQUIPMENT REVIEW NUMBER
SEPTEMBER 1936

**NOTHING
UNDER
SUN**

*We know
it*

... and so do you!
But, once in a long, long
while a new discovery
is made, an invention is
perfected, old habits are
discarded or scientific
development by long,
arduous experiment
brings about new for-
mulas and we make
PROGRESS.

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CALL ON YOU SOON *With....***

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the day or the latest weather report . . . but the
story of our pugnacious effort to develop a
faultless lithograph ink. We have it . . . but
that's his story and if you aren't anxious to
hear it . . . we miss our guess.

**CEB
INKS**

THE PHOTO-LITHOGRAPHER

A LITHOGRAPHED MONTHLY FOR LITHOGRAPHERS

VOLUME 4 SEPTEMBER, 1936 NUMBER 9

Official Organ of the
National Association of Photo-Lithographers

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THE PHOTO-LITHOGRAPHER

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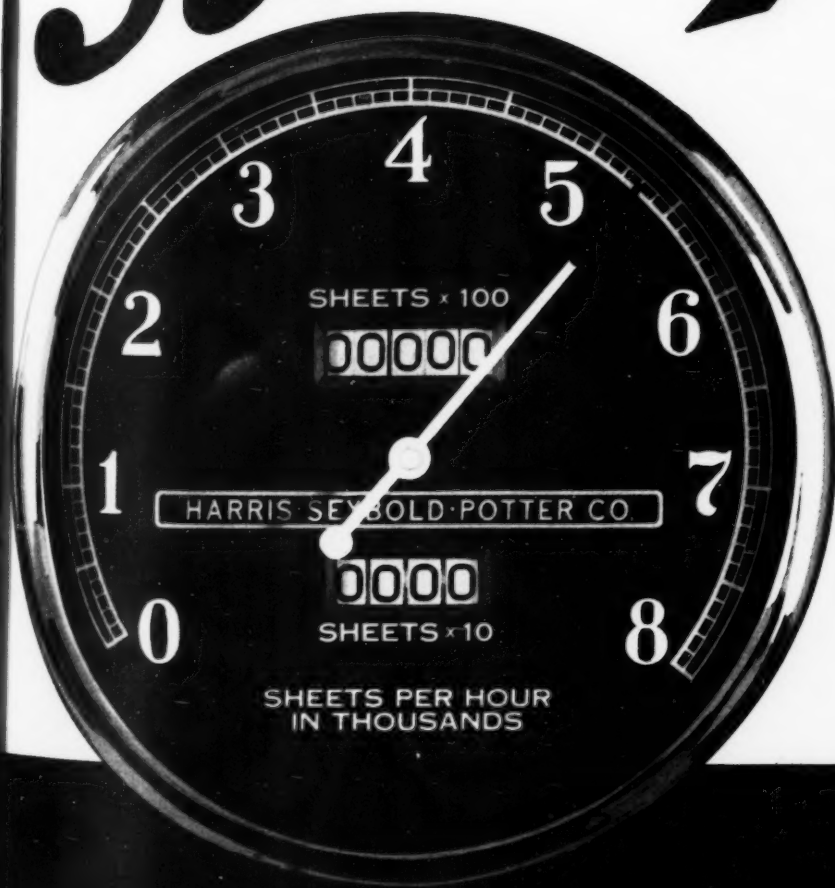
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Stream Feeder

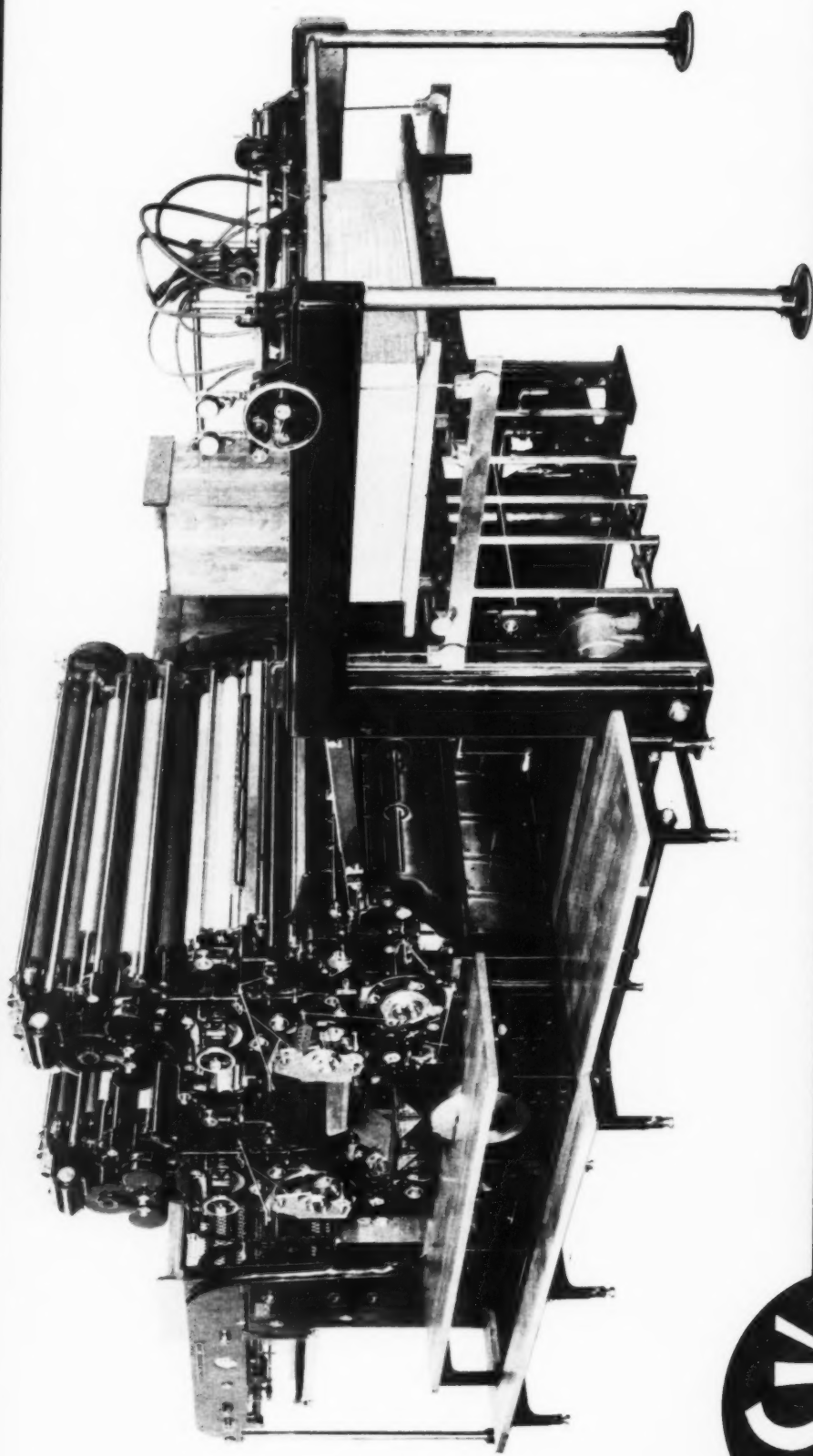
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HARRIS, HERRING & POTTER



151.

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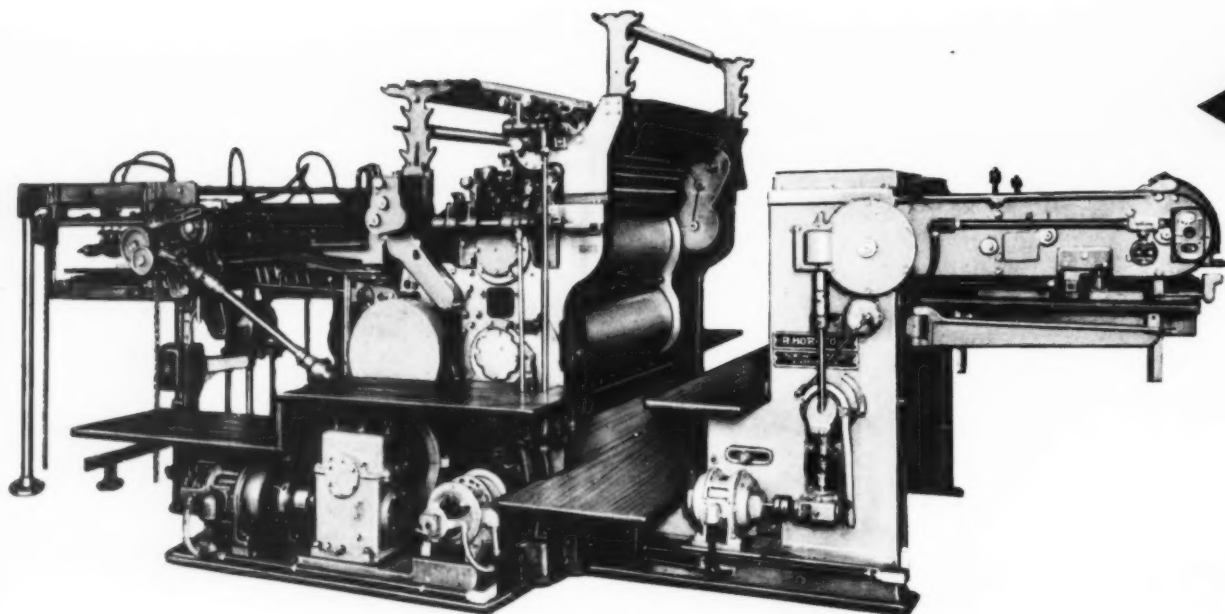
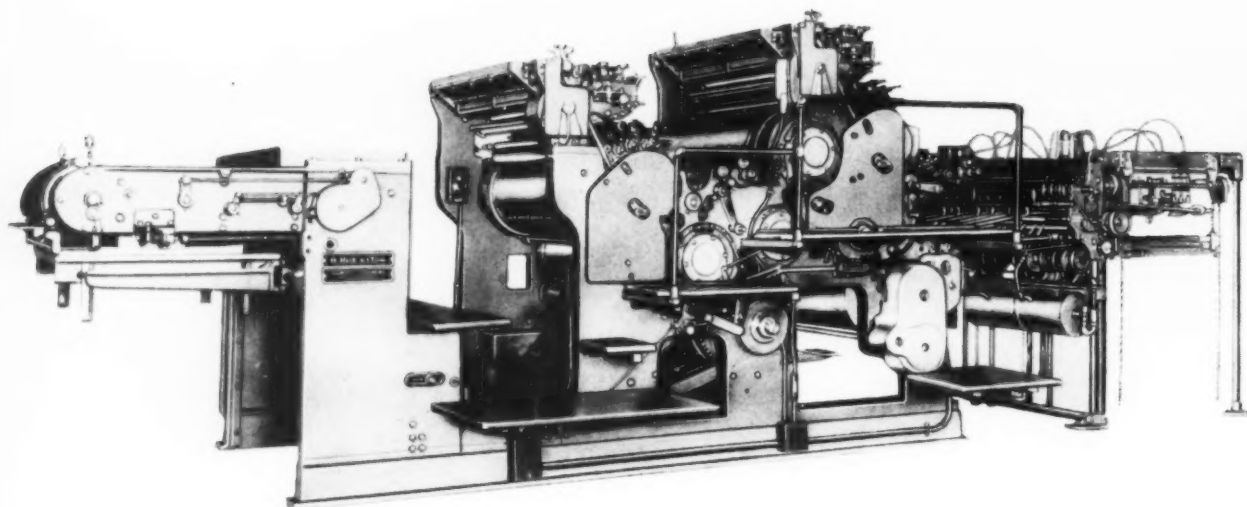


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Profits FR



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with **HOE**

SUPER-OFFSET PRESSES

The sum of its parts equals a more *profitable* whole for you—when the unit is the Hoe Super-Offset Press. The many modern improvements are readily translated into increased savings. For example, even when the cylinders are revolving at the highest speeds extra-strong support is afforded by the solid, unweakened, one-piece side frames, without capped openings . . . Maintenance of register is assured by this extra strength.

But smooth, even cylinder rotation is only one of the many features of the Hoe Super-Offset Press. Both colors—on the Two-Color Press—are printed against the same impression cylinder and are completed without change of grippers. Distribution of ink and water is easily controlled and can be regulated while the press is running—a valuable aid in the production of fine-quality presswork, and a feature which eliminates unproductive shut-offs.

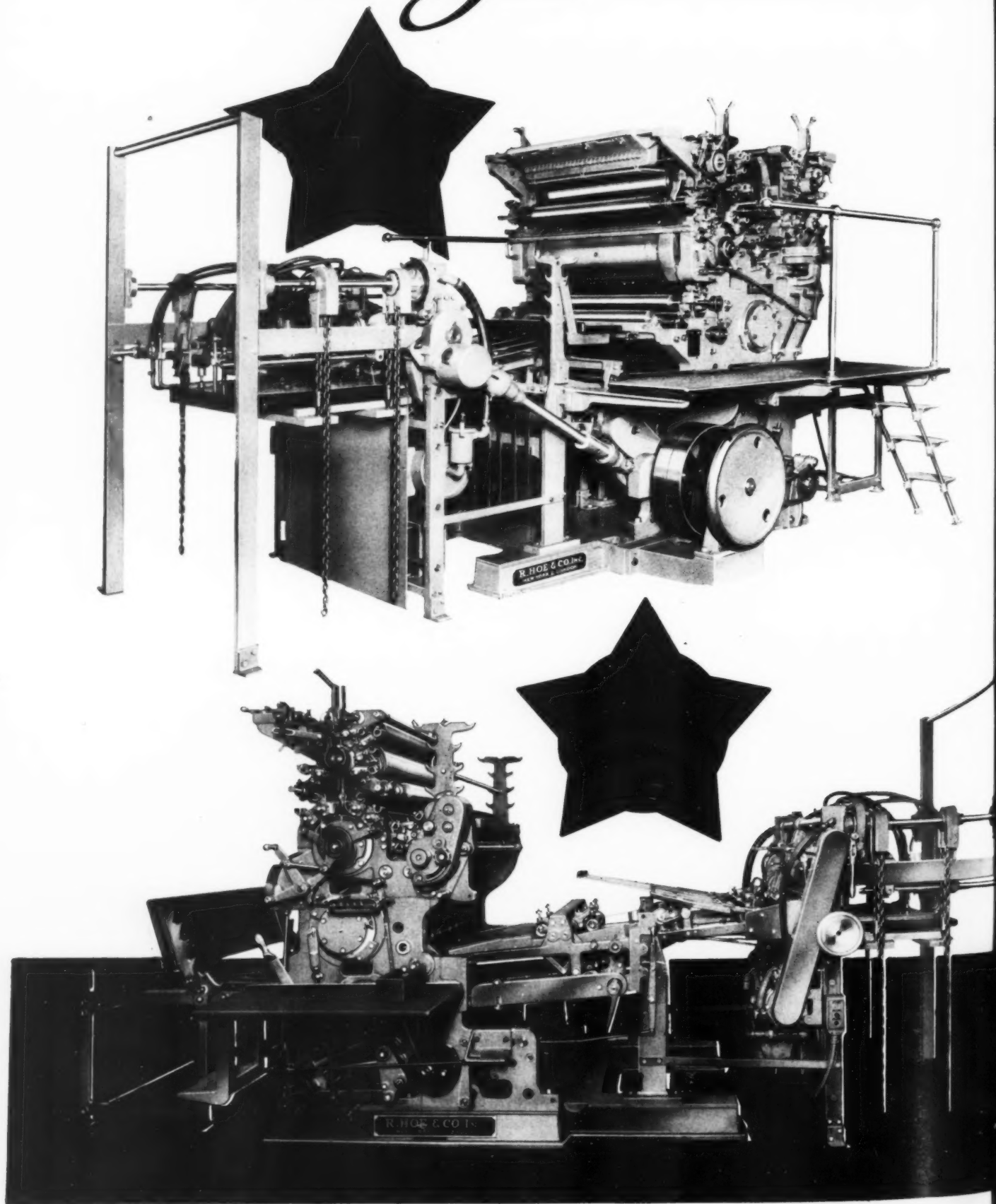
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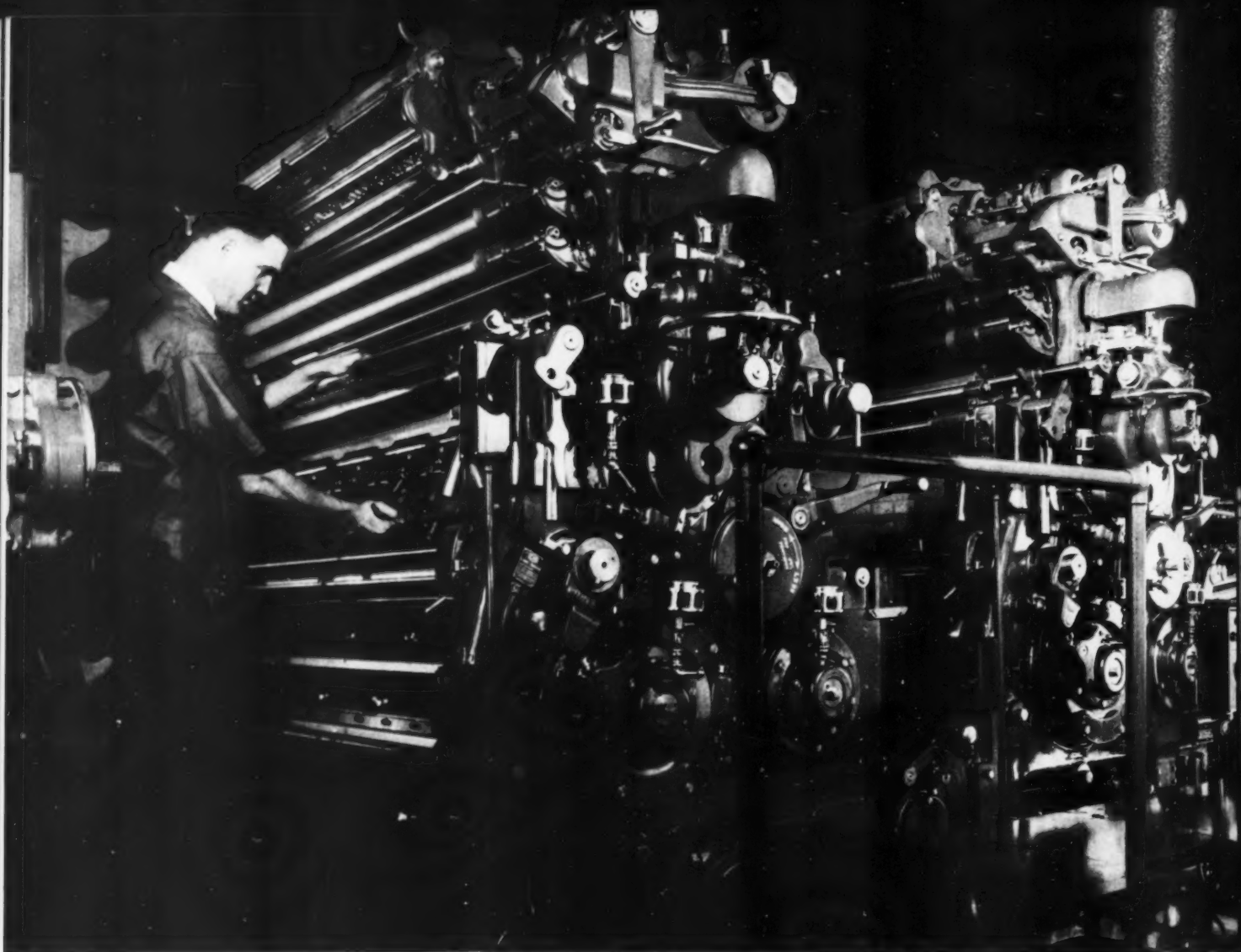
IN THE METAL DECORATING FIELD

HOE *Super-offset*

AUTOMATIC METAL DECORATING PRESSES

The new Hoe Super-Offset Automatic Metal Decorating Presses are capable of handling all weights of tinplate and black steel sheets, up to and including 24 gauge, at speeds of approximately 4,200 sheets an hour. When hand-fed, these presses can handle either tinplate or black steel, up to and including 18 gauge, at speeds equal to the ability of the most expert metal feeders. Sheets heavier than 24 gauge can be printed by making a simple adjustment to hand feed these presses.

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in our Demonstration
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South Damen Avenue,
Chicago—or write now for
complete information.

... JUDGE THEM

Miehle Offset Press

POWERED BY
KIMBLE MOTORS

Miehle Offset Press Demonstration Room showing a No. 44 Single Color press (left) and No. 57 Two Color press (right.)



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Pate
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Miehle

MIEHLE BY PERFORMANCE

The superior and more profitable performance of the Miehle Offset Press results from advantages that were invented, developed and perfected by the Miehle organization . . . advantages now proving their worth every day in plants all over the country . . . advantages never known until Miehle introduced them . . . advantages found only in the Miehle.

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Patented rotary gripper mechanism, assuring accurate

register at every speed — found only in the Miehle.

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Greater hourly production . . . lower operating costs . . . easier handling of the work . . . these, and other Miehle advantages, are the reason.

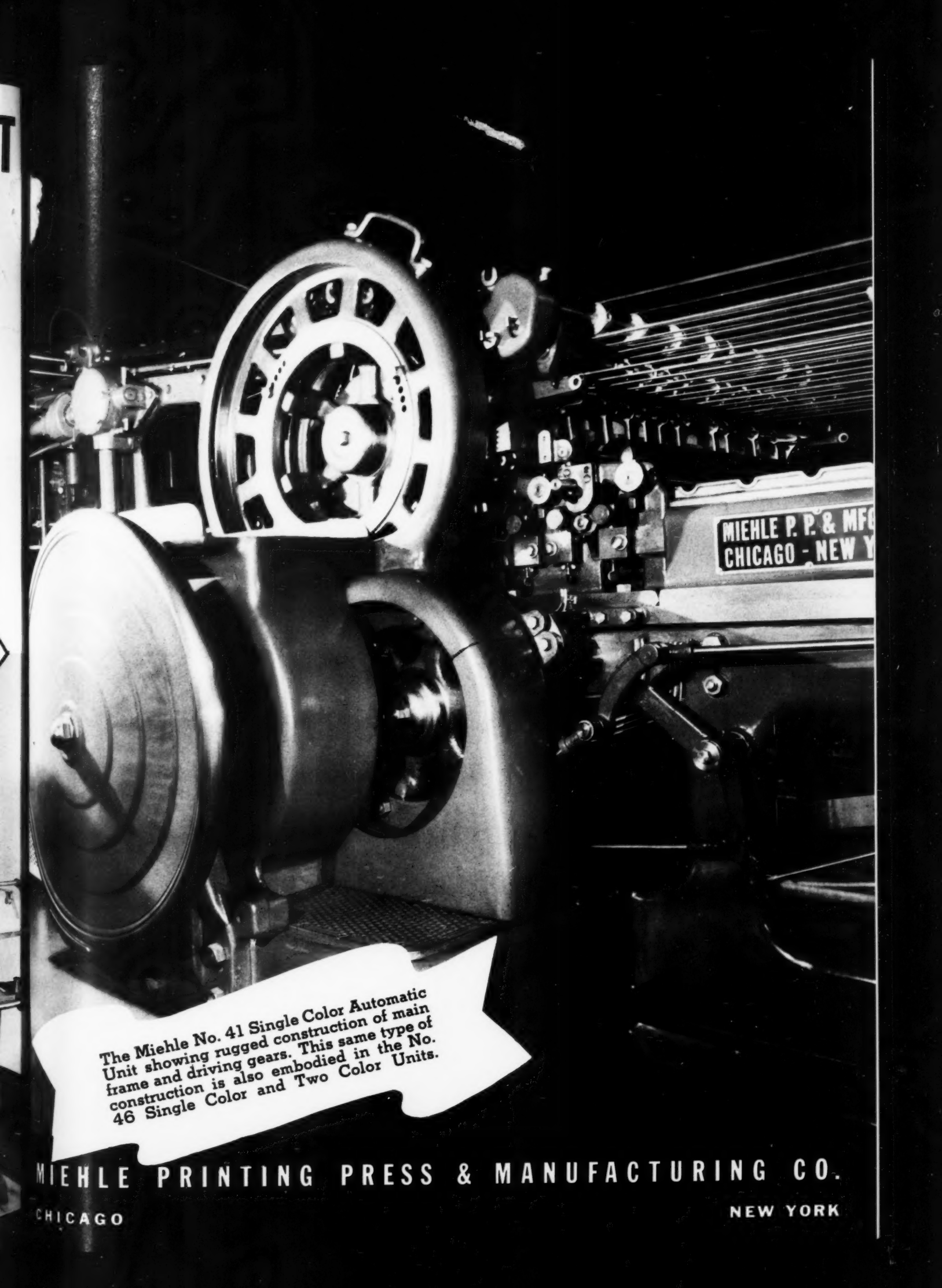
This holds true for any Miehle press you buy . . . be it the Miehle Vertical, the Miehle Horizontal, or the Miehle one — or two color Automatic Units.

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POWERED BY
KIMBLE MOTORS

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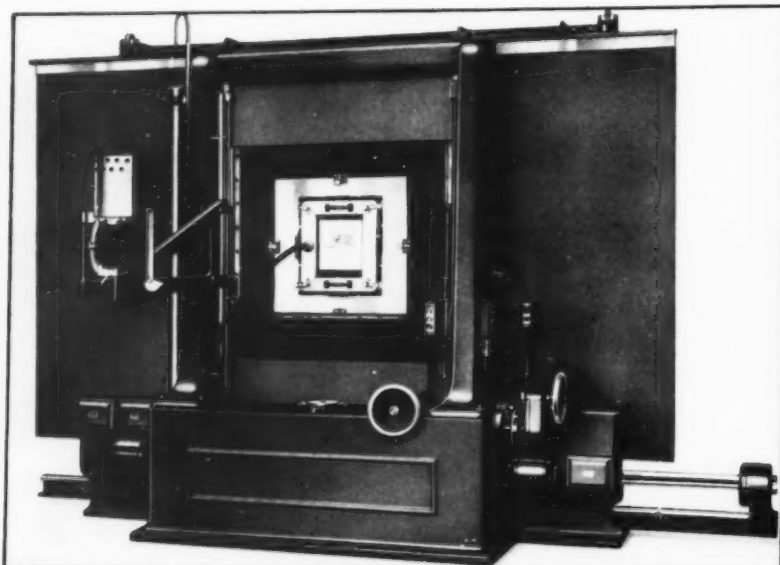
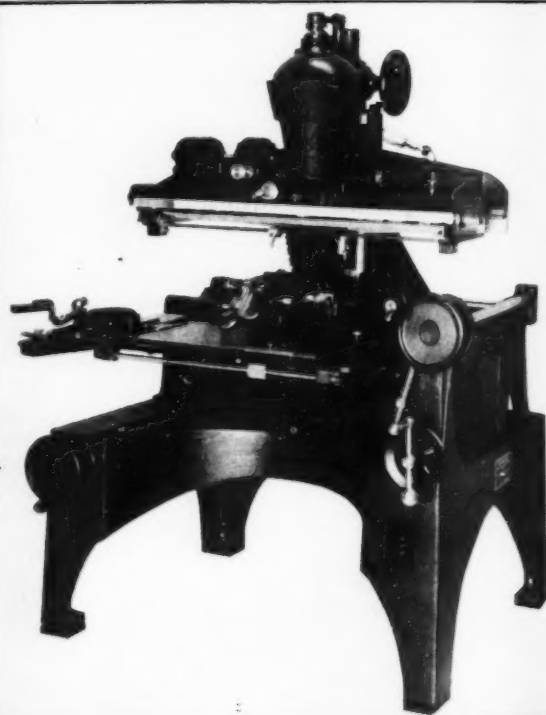


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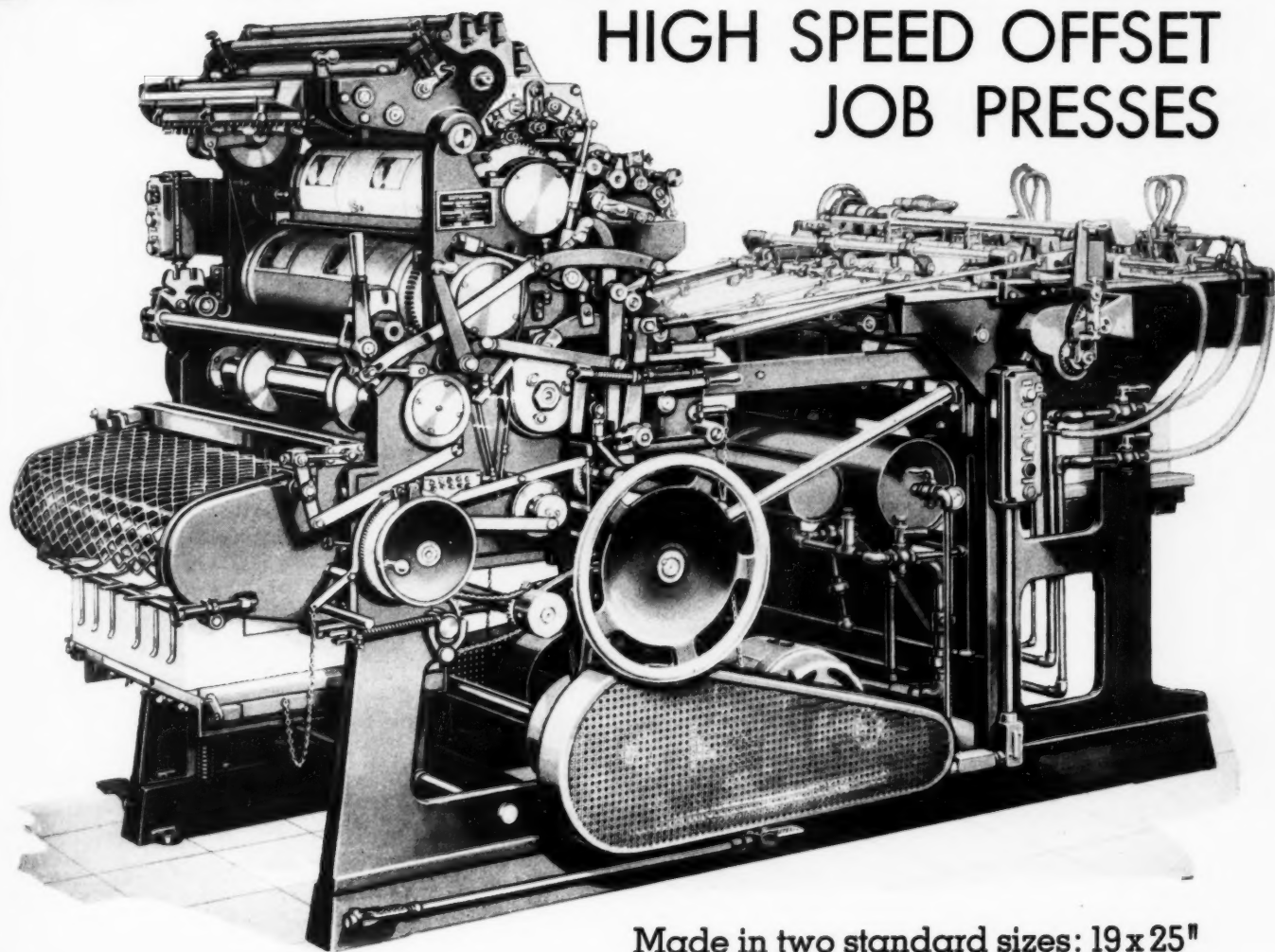
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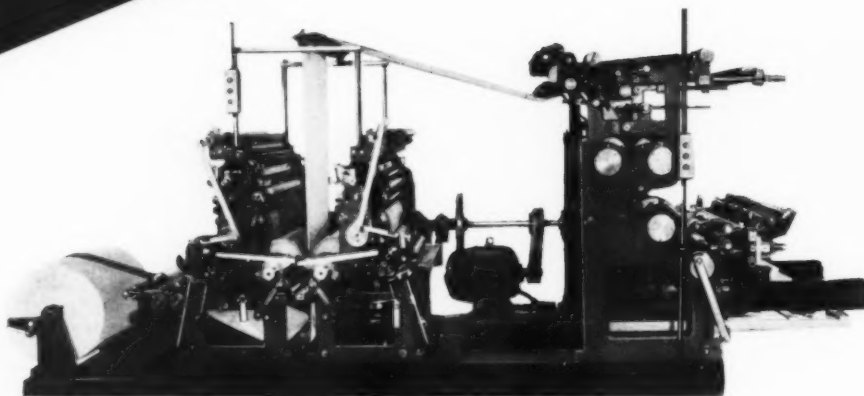
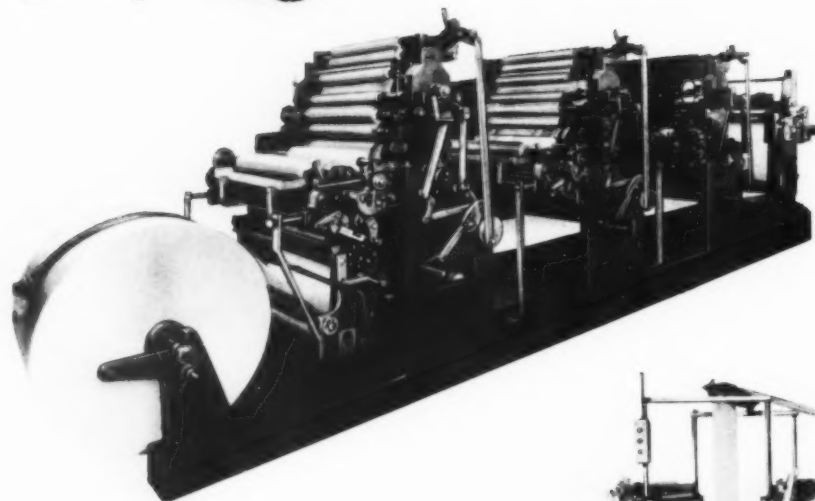
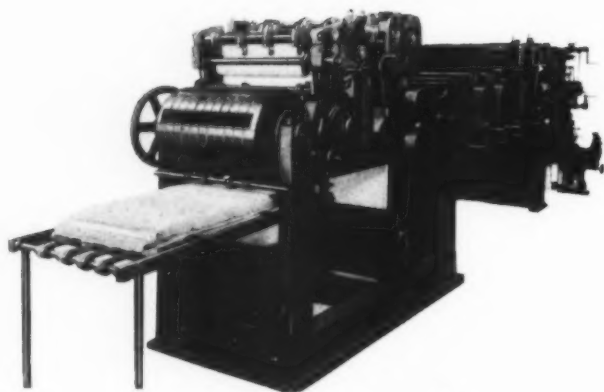
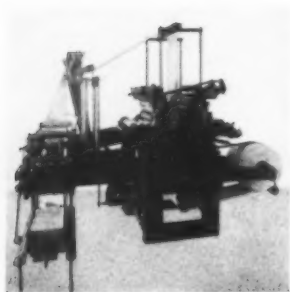
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AT WILL TEND TO OLE PRINTING

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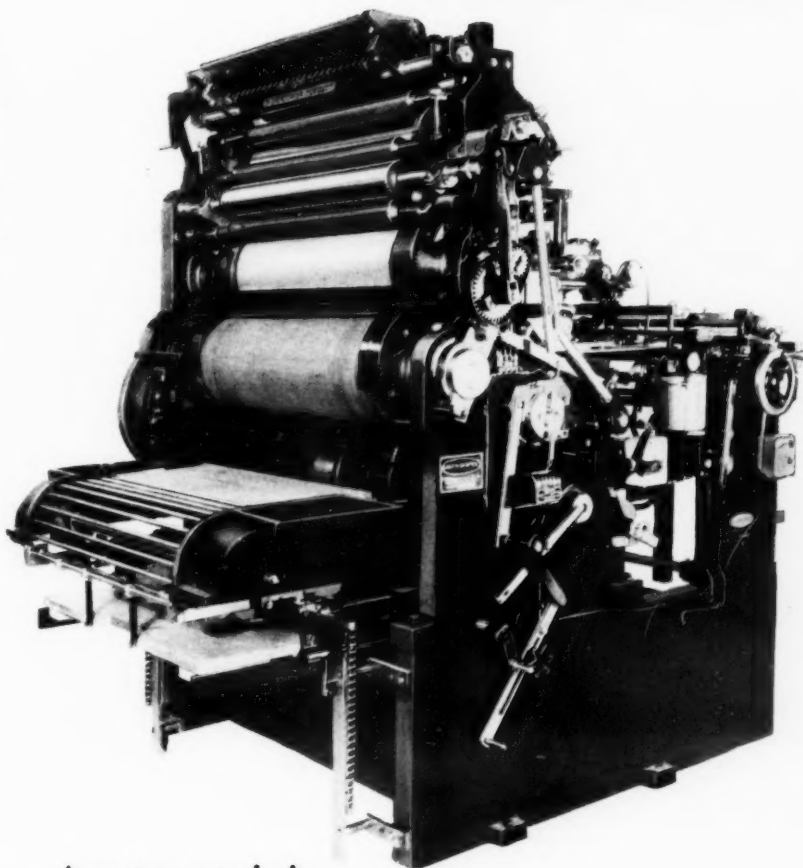
A few years ago small offset presses were considered impractical both by operators and press builders. This condition has changed and the wide need for a small press in the offset field is being recognized.

The small press is not only an excellent and profitable addition for the plant operating large presses, but it is an apprenticeship in offset for the letterpress printer, both large and small. It makes the pioneering and the gaining of experience and proficiency in offset a much less costly problem.

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THE PHOTO-LITHOGRAPHER

The PHOTO-LITHOGRAPHER

PUBLISHED IN THE INTERESTS OF LITHOGRAPHERS TO INCREASE SALES EFFICIENCY AND QUALITY

VOLUME 4

SEPTEMBER, 1936

NUMBER 9

The N. A. P. L. Convention

Largest Annual Gathering Reflects Industry's Advance and the Important Role Played by the Association During the Past Few Years

A KEEN business observer recently remarked that if trade associations have accomplished nothing more than to induce keen competitors to sit down together at the same table and discuss their mutual problems, they have indeed justified their existence.

Nobody can question the astuteness of that remark. Men look upon their rivals as ogres only when they don't know them face to face. But once personal contact has been established, much of the bitterness is dissipated. Indeed, once competitors get down to brass tacks and analyze the problems that face them, they eventually perceive the foibles that are common to all parties concerned and the almost inevitable result is an ironing out of what hitherto seemed like insurmountable differences.

Since its formation the National Association of Photo-Lithographers has successfully executed its function to weld together into a closer industry the component parts that make up the industry. Such vital matters as stabilization, production standards, plant management and trade practices have occupied the attention of the membership at all times. Elsewhere in this issue is an account of how a number of heterogeneous lithographic producers were banded together into an organized industry that has occupied the spotlight together with many other progressive industries, most of which were considerably larger in resources and membership. The record shows that the N.A.P.L. has bowed to no industry in matters of progressive performance and value to members.

Eloquent testimony to the record of this association is found in the convention registration roster. Lithographic executives from all parts of the country are on hand to participate in the get-together and leading suppliers to the industry are likewise in Atlantic City to view the proceedings and observe the trends that are in the offing.

The convention program itself epitomizes the N.A.P.L. platform. The three main factors in the successful conduct of any plant—technical control, sales promotion and management—are to be discussed by experts in these departments. Round table discussion by all who attend is to supplement the scheduled addresses.

This convention is taking place during one of the most heartening business periods we have witnessed during the past five years. Advertising budgets are being expanded on all sides. Quality is again coming to the front. The lithographic price structure is better today than it has been for some time. All indications point to full steam ahead.

Born of dire necessity during a period of distressed business conditions, the N.A.P.L.—convinced that its importance to the industry has been proved—faces the future more determined than ever to expand its scope and usefulness. The participation of all who operate lithographic equipment is invited.

Complete Convention Review in Next Month's Issue

BECAUSE of the vital importance attached to the entire program at the National Association of Photo-Lithographers convention in Atlantic City, September 18, 19 and 20, arrangements have been made to present in these pages next month, a complete report of all addresses and discussions at the meeting.

Outstanding experts in their respective fields will speak on subjects of lithographic technique, cost control, plant management and sales promotion. Following the prepared papers, those in attendance will be invited to participate in round-table discussions.

Watch for the October issue of THE PHOTO-LITHOGRAPHER, for a wealth of practical data of interest to all concerned with the rapid advance of lithography.

Reproduction Proofs

by Russell Bacon

IT has frequently been said that the photographic reproduction of type, as used in offset lithography and gravure, does not make for clean and distinct reading. In some measure this is true. No photographic reproduction of type is as clean and sharp as that produced from metal type surfaces. But, the photographic reproduction of type can be greatly helped by a more careful preparation of the type proofs.

Recently there has been a swing toward the use of transparent films upon which type impressions have been made. This process has an advantage in that it reduces the number of process steps between the original and the finished result but, it still has its problems, and some organizations have reverted to the paper proof method—the method which is under consideration in this article.

In explaining such a procedure as this it is frequently unwise to assume that the reader is familiar with the process, so we ask that those who are acquainted with the photographic reproduction of type permit a few side remarks for the benefit of the others.

In the photographic reproductions of type the typesetter supplies the engraver—be he a letterpress, offset or gravure engraver—with printed copies of the type matter. These are placed before a camera and photographed onto a negative. This negative is transferred to the printing surface and

etched with acid, or otherwise treated, to produce a facsimile of the original typesetter's copy, except that the size may be changed.

Between the setting of the original type matter and its final reproduction there are many places where discrepancies may occur to mar faithful reproduction. The overcoming of these obstacles is the reason for and basis of this article.

The best way to take up these points is to bring out the faults in the

of the type under the glass to be photographed the photographer had no way of knowing that to the lens of the camera part of the type was in an area of halation or high-light reflection which interfered with the proper travel of the light rays necessary in making the photographs. Consequently this particular area, large or small, did not produce a perfect image on the negative, because the camera lens could not "see" the type clearly through the halation haze. These

Railroad Coordinator Eastman is dickering with the railroad employes and also with the managements, holding out to the latter a suggestion that, if they will be liberal in the settlement, the administration may get squarely behind the four bills recently indorsed by the interstate commerce commission and pass them at this session of congress. Those bills provide for motor and water transportation regulation and abolition of the long and short haul clause

Railroad Coordinator Eastman is dickering with the railroad employes and also with the managements, holding out to the latter a suggestion that, if they will be liberal in the settlement, the administration may get squarely behind the four bills recently indorsed by the interstate commerce commission and pass them at this session of congress. Those bills provide for motor and water transportation regulation and abolition of the long and short haul clause in the

Here's what happens when dat ol' debbil halation (light reflection) blinds the camera's eye. One of the most efficient ways to eliminate such an effect is to use a dull coated stock for reproduction proofs.

finished work and work back to the causes and their correction.

In printed pieces produced by the photographic method we frequently find areas of type in which the type appears weak. Comparison with the original proof usually shows that the proofs were sharp enough to have printed clearly, but the result was disappointing. What happened?

In placing the glossy paper proof

faults are not always readily discernable on the negative, except by careful examination. If the glossy proofs are continued in use the fault will persist, possibly showing other areas.

The answer lies in the use of semi-dull coated paper for proofs. This type of surface is less susceptible to glare and halation, with the result that even though the paper may not be absolutely smooth under the glass there is far less chance of these halations occurring.

In examining our finished piece we find another fault which is more local-

Russell Bacon is a well known typographic counsellor and advertising agent. He has won many awards for outstanding typographic design.

ized to individual letters. It is the failure of certain lines or parts of the type to print clearly. The causes of this are more complicated and require careful attention to all stages of preparation to correct.

To properly consider the correction of this fault let us reverse our analytical procedure and start with the making of a type proof.

To make a type proof the raised

Another point is the use of a non-glossy, non-scratch ink. The non-gloss or dull characteristic has its value in that it does not cause ink halations in photographing. The non-scratch feature prevents the smearing or scratching of proofs in handling and pasting.

The type form should be cleaned and dried after not more than four or five proofs. Care should also be exercised that paper lint does not get in the

there is certain to be some depression into the paper. If the packing behind the tympan sheet is soft this depression becomes exaggerated and seriously affects future steps, as will be shown later. By putting a sheet of celluloid only between the tympan sheet and the steel impression roller you will have the proper hard surface. Beneath the form should be a packing of soft papers, to absorb the pressure of printing and variation in type height. Forms should always be locked in chases and carefully squared. Before any proofs are taken the quoins should be loosened slightly to permit movement of individual types or lines. A word to the wise is: Be sure and tighten the quoins before lifting the form!

Now we come to the reason for this unusual procedure.

When proofs in which the type has been deeply impressed into the paper, from the use of soft packing, are placed before the camera, the rounded edges of the depressions cause highlights beside the printed letters. These highlights, interfering with the proper reflection of light rays into the lens of the camera, are what cause the break-down of the letters. Especially is this true in those type faces having fine lines and serifs. By reducing the amount of depression into the paper by the type face you reduce the chances

SUPER - BLACK

An ugly, fuzzy reproduction is the usual outcome of a proof pulled with improper inking. The author of this article tells below what sort of inks should be used and how they are to be applied.

face of the type is covered with ink and impressed upon paper. In making this impression any imperfection in the original type-face will be transmitted to the proof—or printed reproduction. Therefore, the type-setter should take especial care to see that his type is clean and undamaged.

Ink plays an important part in the making of clear type proofs—more, in fact, than many typesetters realize, or they would not use such a poor quality of ink. When ink is applied to the type face it has a tendency to mound in the center of the face. Then, as the time lengthens between inking the types and taking the proof, the ink runs over the edge of the type face. When the proof is finally made the edges of the type are smeared and uneven.

The answer to this problem is largely in the quality of the ink used. The finest black ink made is not too expensive, considering the small quantity used and the superior results obtained.

The ink should be quite stiff—just soft enough so that it will not grab the paper—using only enough to cover the surface of the type. This procedure retards the ink from running over the edges.

ink or on the type. Brushing the edges of the piled paper after cutting to size will help retard the lint nuisance.

Because of the particular care and handling required in the making of good reproduction proofs typesetters should really set aside a modern proving press for this grade of proof only.

Making the press ready for reproduction proofs requires a reversal of common make-ready practice in that the impression surface should be extremely hard and the soft packing

SUPER - BLACK

Broken letters are another one of the bugaboos of reproduction proofs. Some of the letters shown here are nicked, uneven and unlovely. Imperfect type cannot help but show itself in your final proofs.

should be placed *under* the type-form on the bed of the press, to take up variations in type height. Many old-timers will probably scoff at this until practice proves its value.

The reason, however, is perfectly plain.

When type is impressed upon paper

of letters or parts of letters, failing to print.

Another important requirement, spoken of earlier, is the use of semi-dull paper because of its resistance to high-lighting on the curves of the depressions.

(Continued on Page 55)

Should I Install Offset Equipment ?

A Comprehensive Review of the Considerations That Should Guide a Prospective Buyer of Lithographic Equipment in His Purchases

By Walter E. Soderstrom

THE question, "Should I Install Lithographic Equipment" is on the tongue of many printers and letter-shop owners today. Lithographic equipment is being installed by some who have not fully considered the question in the light of cost of investment, cost of operation and the status of the market in which they plan to operate.

It is very evident that some are already paying a heavy price for rushing into the lithographic industry without giving full consideration to the problems of the lithographer.

I would like to approach the subject from the viewpoint of answering the question for a board of directors who have, let us say, commissioned me to make a survey of the question and bring in general information on which they will decide whether the answer is "yes" or "no." After all, you should hear all sides of the question and finally make your own decision.

Owners of lithographic equipment can be grouped into three classifications:

1. The lithographers doing a high-grade color work, who usually specialize in such products as labels, posters, maps and displays.
2. The lithographer doing a good volume of color and high-grade black and white work of the tailor-made kind: broadsides, folders and direct mail material.
3. The lithographer who specializes in producing in combination forms on a standard bond stock, the requirements of many customers; thus creating a large volume of the same kind of work which is usually turned out on large presses with a resultant low cost. Much of the saving affected because of producing work in combination form is passed onto the customer in the form of low prices on new work.

So that we may be specific, let us set up an imaginary plant with new equipment and measure the floor space and investment necessary for each department.

The investment adequate for a setup to produce lithographic work should be carefully measured by a lettershop contemplating going into the lithographic industry. The equipment necessary will depend in some measure on the kind, quality and quantity of work to be produced. Obviously, halftone or color work makes necessary equipment and supplies different from that used on black and white line work. In considering the question of installing lithographic equipment, you should

know much about your customers requirements. The kind of work your customer will require bears an important relationship to the equipment to be purchased. Whether the work is of the inexpensive black and white kind, produced and sold under the name "photo-lithography," or whether the work is of the tailor-made, or more exacting kind—in the end it is less expensive to install good equipment.

We may well eliminate from our consideration here the first classification, the large lithographic plant producing a high-grade specialized product. The cost of equipping a plant large enough to compete on specialties is much higher than that of equipping a smaller size letterpress plant.

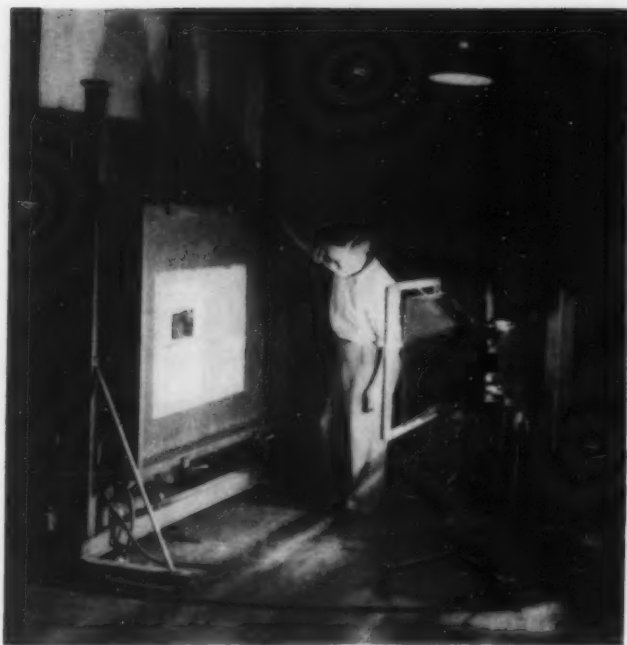
With our discussions narrowed down to eliminate the question of installing equipment to compete with large lithographic plants, let us consider the question of whether we should install lithographic equipment to handle black and white work of the combination variety. To consider this question intelligently, we need to know many things:

1. Competition within the area.
2. The press equipment best suited for combination work.
3. The cost of securing and operating this equipment.
4. The current market price in a particular area for this kind of work.
5. What has been the experience and what is the financial standing of those already operating in the area.

No doubt you already know what competition you will face in your area should you enter the photo-lithographic field.

One way to obtain the financial index—a measuring stick of the competitors handling combination work—is to secure from some firm from whom you buy considerably, the financial ratings of the photo-lithographic firms operating in the area.

As you well know, every graphic arts establishment is rated by a rating agency as to how it pays its bills. You are given a rating 1-2-3-4 or 5 by the credit rating agency. Number one means that you are discounting your bills on the 15th of each month. Number two, that you are taking thirty to sixty days on your bills. Number three, that you are taking from sixty to ninety days. Number four, that you are taking longer than ninety days. Number five, that you are in financial



difficulties and should be sold only on the C.O.D. basis. Place beside the name of each firm operating in your area the rating assigned the firm by the accredited rating agency. Total these figures and divide by the number of firms listed in the tabulation, and you obtain the average index to the financial standing of the photo-lithographic firms operating in the area.

The cost of equipping a plant to handle combination work depends on the size and kind of equipment purchased. The 22 by 34 and the 34 by 44 presses because they contain 16 and 32 units $8\frac{1}{2}$ by 11 inch are the sizes best suited for combination work.

The current market price on combination work varies greatly throughout the country. This wide variation in prices is due, in large part, to the cost of turning out such work on small presses as against that of turning it out on large presses, plus a productivity of a few hours a day as against a productivity of two, or in a few cases, three shifts a day. The owner of large presses operating his plant at a heavy productivity is in a stronger operating position than is his smaller competitors operating small equipment.

In large centers of population, combination houses with large equipment and heavy productivity are building up a large volume of work, thus creating low costs and passing much of the benefit along to the customer in the form of low prices. Regardless of whether this is done to create some kind of record or for some other reason, it certainly is suicidal to install a lithographic plant to compete on combination work with photo-lithographic houses operating on this basis.

If you are determined to compete with these houses you should install large presses and operate with such orders as can be obtained at the current low market prices, and be prepared to suffer a good stiff loss until such time as you can build up a production volume equal to those already in the field.

Combination photo-lithography is a very complex

trade. Detail is multiplied many times over. The cost of handling an order for 100 copies on a unit $8\frac{1}{2}$ by 11, which is billed for a mere pittance, is nearly the same as that of handling an order for several hundred or a thousand dollars.

The third classification of lithographer is that group operating one or two lithographic presses. These firms usually have highly skilled help, use the best of materials and turn out tailor-made work, which is sold at prices which show a good margin of profit.

Regardless of the kind of lithographic equipment to be installed, it is far less expensive in the long run to buy new equipment. A lithographic press, in addition to having rollers, ink fountain and other working arts normal to a printing press, has a rubber blanket and a chemical fountain and dampening mechanism: two working parts which often govern the profit or loss of a plant.

There are firms, of course, who begin operation with second-hand equipment and after getting something of an education they buy new equipment. Many of these houses, however, readily admit their error of speculating with the junk man.

To budget the equipment necessary for a small lithographic plant, let us say we will buy new equipment. Assume we have decided to install either a small one or two-press plant, complete with camera and plate making equipment, so we can handle the better grade tailor-made black and white work, with an occasional color job. Let us examine the equipment and the investment necessary to set up these plants.

BUDGET OF INVESTMENT NECESSARY TO SET UP A LITHOGRAPHIC PLANT

Equipment Necessary	Floor Space Necessary	17 x 22	22 x 34
		Investment Necessary	Investment Necessary
One Camera, 20 x 30 complete with arc lights, lense, dryers and all of the equipment usually found in this department. One plate-making equipment whirler, vacuum frames 26 x 30	800 sq.ft.	\$3,200.00	\$3,200.00
One offset press complete with motor..	300 "	5,000.00	12,250.00
Glass tables, benches for stripping, opa- quing, tusching, etc.....	150 "	500.00	500.00
Miscellaneous equip- ment, Plumbing and Electrical work	250 "	1,300.00	1,550.00
	1,500 sq.ft.	\$10,000.00	\$17,500.00

In buying a small plant, it is comparatively inexpensive to make provision for an increase in press sizes. Whirlers and vacuum frames require a comparatively small part of the capital investment and it is therefore suggested that in buying this part of the equipment, sizes be purchased with an eye to buying larger presses.

The question is often asked, "How many presses must an establishment have to warrant an investment in camera and platemaking equipment?" In large centers offset plates can be bought from trade platemakers. Examine the price lists distributed by local platemakers and you will find much helpful cost data. The delay in securing plates from a distant point makes questionable, however, the practice of a lithographic establishment buying all of its plates. Productivity in both camera and platemaking departments in a small plant is usually low. While it may be expedient at times for a one-press plant to buy its plates, nevertheless you cannot go far unless you own and operate your own camera and platemaking equipment. Therefore, it is strongly recommended that any newcomer to the lithographic field seriously consider the installation of his own platemaking equipment.

Skilled Help and Wages to Be Paid

The question of competent help is of utmost importance to a newcomer in the lithographic field. Skilled mechanical workers in all branches of the industry are very scarce and particularly so as regards platemakers and pressmen. There are no good offset pressmen or platemakers unemployed. In this connection do not make the mistake of putting a multigraph operator or a relief pressman on an offset press.

A competent letterpress pressman spends years in learning his trade. Makeready, register, ink distribution—these are some of the elements of presswork which a good relief pressman must know thoroughly. The offset pressman, in addition to knowing these factors, must know something about the chemically treated plate he is to run as well as how the water fountain and dampening device should function—working equipment not common to the type printer. A lithographic plate chemically treated is vastly different from an electrotpe or halftone. When an electrotpe or a halftone goes bad, the press can be stopped and the form patched up. If anything happens to one small portion of a lithographic plate, it usually means an entirely new plate must be made.

Regardless of the equipment you install, equipment of itself cannot produce quality work. The greatest expense in many lithographic plants is that of inefficient help. Quality flies out the window, equipment is abused and costs are exorbitant when a plant employs inefficient help. Operation is not easy even with good help. Talk with your friends who have operated for a few months. Ask how many plates they have made over. When a plant employs poor help, a picture of poor management and plant conditions is sent customers and prospects in the form of high estimates, inferior work and quarrels to obtain from the customer extra costs which should not appear in the picture.



The lithographer lives with his fellows. They shape his destiny almost as much as he himself does, though in a different way. He accomplishes little without their friendly aid. He cannot think through many problems without their hints. He grows strong on the meat of the experience of others, hence he must understand human nature and all the arts of managing it. If there is one pointer a lettershop needs in considering offset, it is this: to successfully operate he *must employ competent help* at proper wages.

The help necessary for a lithographic plant and the wages to be paid will give us further light on our picture. Let us consider a plant such as a small one we have set operating in the New York area. This plant produces black and white tailor-made work. The mechanical wages in this plant run approximately:

Department	Weekly Payroll
Camera Department	
One Photographer.....	\$48.00
Stripping Department	
One negative stripper.....	40.00
Platemaking Department	
One platemaker.....	48.00
Press Department	
One pressman.....	50.00
Miscellaneous	
Helper.....	14.00
	<hr/> \$200.00

The annual mechanical payroll for the plant we have set up approximates \$10,400. If the relationship of

wages to sales runs as low as 30%, then you must sell an annual volume over \$35,000 to cover the cost of operating your lithographic plant. Add another good all around man for the 22 by 34 press plant and you add approximately \$2,600 to your wages. Your annual sales volume in a 22 by 34 plant should approximate \$43,500.

Some Combination Business Is Under Contract

An important factor in any line of business is a decent volume of orders. A person planning to go offset should consider the orders to be had. Are they large or small, can the work be run in combination, how are orders obtained? Are the large users of photo-lithography already under contract with lithographic establishments already in the field?

The photo-lithographer handling combination work, as previously stated, because of speed of production and standardization of sizes and stocks used, can produce the customer's photo-lithographic requirements at low costs under a uniform price. A uniform price makes it possible for a photo-lithographer to contract with customers for a year or more for all of the customer's black and white requirements at a price of so much per hundred copies of standard size units. There are many such contracts now in effect.

An all important consideration in selling is the price the product is sold for. The question of selling price can be considered best in the light of a survey of accounts already on the books. Do not fool yourself with the old argument that volume makes for profit.



A bird's-eye picture of the lithographers' expense in this plant will give further information on which to answer our question. The tabulation presented here covers budgeted costs. It makes no provision for profit. The picture of the sales necessary to cover costs in this small one press plant appears:

LITHOGRAPHIC BUSINESS BUDGET FOR ONE YEAR To Cover 17 x 22 Press Plant As Set Up

<i>Accounts</i>	<i>Total</i>	<i>Ratio</i>
Materials.....	\$10,640.00	30.4%
Rent.....	1,050.00	3.0
Insurance and taxes.....	525.00	1.5
Wages.....	10,500.00	30.
Light and Power.....	525.00	1.5
General Expense.....	5,110.00	14.6
Salaries (Executive and Clerical)	3,500.00	10.
Selling Expense.....	3,150.00	9.0
	<hr/> \$35,000.00	<hr/> 100.0%

Economic Hourly Costs and Production Standards

Every establishment should know the cost of doing business. Survey the failures of graphic arts establishments during the past few years and you will find two underlying reasons: (1) Lack of knowledge of costs, and (2) inadequate working capital. Surely after the lessons of the past few years, everyone should know very thoroughly the dangers inherent in operating with insufficient funds.

You cannot know your lithographic costs until you are actually operating in the field. You can, however, take advantage of the cost data resulting from studies made by the photo-lithographic group. Economic Hourly Costs and Production Standards have been set up and these should be of inestimable value to you in surveying the cost of operating lithographic equipment.

Whether a firm uses an actual experience rate or a budgeted rate, it has a measuring stick to place alongside its own costs. Let us look at the economic hourly costs and the production standards of the industry, and then let us apply this information to the equipment we are considering. With this data available, we can apply it to typical specifications and this will give our estimator an opportunity to weigh with us the question of whether we should install lithographic equipment.

We present below a summary of time information gathered from twenty photo-lithographic plants operating in the New York area. This study was based on black and white line of work of the combination kind, run on standard 20 lb. bond. No provision in the figures below has been made for pasting up copy, enlargements or reductions, halftones, stripins, negatives which must be re-shot, plates which must be remade, washups, ink, time lost because of atmospheric conditions or stock variations, bindery work and other time elements which do not enter every job. The report herewith is an average of the time actually used on putting a plate through from the camera to the bindery. A stop watch was used to

check the time where the information furnished appeared inaccurate.

Operation	Sizes	Time
Camera Work	8½ x 11.....	9 minutes
	11 x 17.....	12 "
	20 x 24.....	18 "
	22 x 34.....	30 "
Stripping	17 x 22.....	24 "
	22 x 34.....	36 "
Opaquing	17 x 22.....	24 "
	22 x 34.....	42 "
Tusching	17 x 22.....	18 "
	22 x 34.....	30 "
Platemaking	17 x 22.....	30 "
	22 x 34.....	42 "
Makdready & Presswork	17 x 22.....	30 "
	22 x 34.....	42 "
1000 copies		

The supporting data which goes to make up the economic hourly costs shown is available to members of the National Association of Photo-Lithographers. Expenses which go to make up economic hourly costs include depreciation, rent, light and power, insurance, taxes, direct supplies, repairs, payroll compensation insurance, general factory supervision and a proper proportion of administrative and selling expense. We should bear in mind the fact that the rates discussed here are for simple black and white work, color work obviously requires higher rates. The Economic Hourly Costs which we will consider include:

Department	Hourly Rate
Camera 20 x 20.....	\$3.75 per machine hour
Stripping.....	2.25 per man hour
Opaquing.....	1.70 per man hour
Vacuum Frame 29 x 36.....	3.75 per machine hour
Tusching.....	2.10 per man hour
Press 17 x 22.....	4.15 per machine hour
Press 22 x 34.....	6.30 per machine hour
Cutter less than 50".....	2.10 per machine hour

Applying the Operating Time and Rates to a 17 x 22 and a 22 x 34 Press Plate

A look at the Economic Hourly Rates and Production Standards applied to the two press plates, using film negatives, we are considering shows the following:

17 x 22 Press Plate	Fraction of Hour	Rate	Budgeted Costs
Camera (average).....	.3	\$3.75	\$1.13
Film negatives.....		.25	1.00
Stripping.....	.4	2.25	.90
Opaquing.....	.4	1.70	.68
Metal Plate and Use.....			.75
Platemaking.....	.5	3.75	1.88
Tusching.....	.3	2.10	.63
Presswork M.R. .2.....			
Run. .3.....	.5	4.15	2.08
Cost of making plate and running 1000 sheets 17 x 22 form.....			\$9.05

22 x 34 Press Plate	Fraction of Hour	Rate	Budgeted Costs
Camera (average).....	.5	\$3.75	\$1.88
Film Negatives.....		.25	2.00
Stripping.....	.6	2.25	1.35
Opaquing.....	.7	1.70	1.19
Metal Plate and Use.....			1.00
Platemaking.....	.7	3.75	2.63
Tusching.....	.5	2.10	1.05
Presswork M.R. .3.....			
Run. .4.....	.7	6.30	4.41

Cost of making plate and running 1000 sheets

22 x 34 form.....\$15.51

If you are planning to install lithographic equipment and desire to insure yourself against loss, one way to accomplish this is to associate yourself with a lithographer already in the field. An association of this kind will give you experience in handling your customer's lithographic requirements. It will give you an education in selling, estimating, producing and costing lithography. Under this arrangement you can carefully measure whether you are losing orders because of the particular process that is being used or because of salesmanship, unnecessarily high cost of standing or obsolete equipment or other factors.

If you are determined to go into the lithographic field you can best accomplish it in short spans. It is like walking downstairs. You can do it best if you take one or two steps at a time. If you go down three at a time you are likely to stumble, but if you try four at a time you surely will fall head over heels.

New Webendorfer Building Now Under Construction

Additional facilities for the manufacture of lithographic presses are being constructed by the Webendorfer-Wills Company, Inc., Mount Vernon, N. Y. One new saw-tooth building, covering 6250 square feet of space, has already been completed. This is designed to meet the demand for web, reel-fed offset presses.

Another building, now under construction, will further augment the manufacturer's floor space to the extent of more than 6000 square feet. This building is to be two stories high, the upper floor being devoted to office space and engineering department, while the lower floor will house additional machine tool equipment for the production of the Little Giant cylinder press, sheet-fed and web, reel-fed offset presses.

A Reliable Guide

to the best services, supplies and equipment for photo-lithographers . . . The "WHERE-TO-BUY-IT" Section which appears in this publication every issue.

Turn to it now.

IF you are considering buying lithographic presses you should know some of the earmarks of good equipment. A good lithographic press should be characterized by:

1. **Simplicity.** A lithographic press should be simple and so designed that a lithographic pressman of even average ability can operate it successfully.

2. **Accessibility.** The parts of the press should be easily accessible and handy to adjust. The motor should be placed in a position so as not to interfere with the operator or occupy valuable floor space in the press room. The ideal press is one that has a minimum of parts requiring adjustment. No press, offset or otherwise, is producing work which can be billed to the lithographer's customer when many productive units are being employed in "adjusting." This is one of the reasons for shrinkage of printed sheets at the end of the day as compared with the running speed of the press per hour or minute.

3. **Rigidity.** The press should be rigid enough to withstand heavy usage under a good speed, long hours, on any kind of stock and it should stay put after adjustments are made.

4. **Ink and Water Distribution.** The roller and fountain are two of the most important working parts of a lithographic press. An offset press could be built with the finest type of ink distribution, of ample covering capacity, and still be the poorest printer because it might have an inferior water fountain and moisture control mechanism. It is good to have a rigid water fountain rather than a flimsy pan and a rigid frame for holding the moisture carrying roller and adjustment capable of controlling the moisture more particularly toward a minimum capacity rather than a maximum quantity of moisture; a surplus of moisture or water will soon kill the effect of a splendid ink distribution and produce an inferior product.

5. **Side and Front Guides.** The side and front guides should be accessible and easy of adjustment.

6. **Capacity of Feeder and Delivery.** The greater the capacity of the feeder and deliverer, the greater is the saving in time of handling sheets and the less will be the chance of offsetting sheets in handling.

7. **Visibility and Complexity of Working Parts.** It is highly desirable that as many parts of the press as possible be visible and constructed so that they can be taken apart and put together without disturbing other working parts of the press.

Let no one misconstrue however the purpose of having the parts visible. In plants which are not properly run, the visibility of press parts invites the pressman who thinks he is mechanically inclined to start playing with wrenches, screwdrivers, thumb screws and what not, with the result that while he is so enjoying himself he is not producing printed product for his employer and he is probably getting and actually does in many cases

How To Size Up Equipment

Thirteen Important Factors That Should Be Weighed By Prospective Buyers

get his press so out of adjustment that a hurry call has to be sent for the press manufacturer's service man to put it back in shape so that the inquisitive pressman can again operate it. Pressmen should make no adjustment so long as the press prints properly.

8. **Rollers.** A lithographic press should be built with cylinders sufficiently large to carry the several form rollers with their complement of vibrator, distributor and rider rollers and

at the same time provide for convenient adjustment of any individual roller.

9. **Preparation Time.** How long does it take to get a plate on the press? How long does it take after the plate is on the press to get the lay of the sheet and begin running? The importance of these two time elements is obvious, especially on short runs.

10. **How Much Gripper Margin Is Required?** The size of the sheet a press will take is of vital importance. You should know how close to the end of the sheet you can print. Some presses require a greater gripper margin than others.

11. **Motor.** Does the price include the motor? Some equipment is sold without motor. You should ascertain whether the price quoted includes the motor.

12. **Exaggerated Claims.** Does the equipment manufacturer make exaggerated claims in behalf of his equipment? Is the speed promised reasonable? Any purchaser of lithographic equipment should ascertain whether the manufacturer is inclined to overstate his case, and if so should make the proper discount.

13. **Press Register.** Will the press register a close registered job? The press should give fairly good register when properly adjusted and tuned up and when the speed is comparable with the nature of the paper and the job. There are however two points which should be carefully considered; first, will the press under normal operation hold its register at the maximum speed suitable for the job, and second, what is register? Register is of vital importance. You can determine whether the press registers by running a few sheets through the press twice and note whether the ink deposited on the sheet is in exact position with that deposited on the sheet when it was first put through the press. It would be a good thing for the industry if there were a general rule for commercial register. One which has been suggested and accepted by many firms in the graphic arts is the following:

"In order that a press shall be considered as registering properly, it must be capable of running paper having perfect edges at the guide points twice through the press and print a line of the thickness of a one-half point face rule at the front guides and side guide without the line showing double. In other words, the line printed by a one-half point face rule may be thickened by running through the press twice so that

it is the width of a one-point face rule and still be considered in register. A tolerance of one percent, however, will be considered permissible; that is, if on an average one sheet in every hundred shows a slight double line, and the other ninety-nine sheets do not show the one-half point face line thickened to more than a one point face line, the register shall be considered as coming within this rule."

Anyone considering purchasing a lithographic press most certainly should consider the experience of those

who have long operated such equipment. It is very desirable to see the press in actual operation under commercial working conditions, and in picking a place to visit be sure to pick one where they have a pressman who knows what it is all about. There are many places who employ office boys to run presses and then blame the equipment manufacturer if the press does not function properly. Give the press the advantage of having it operated by a pressman of at least average intelligence.

The National Ass'n of Photo-Lithographers

What It Is and What It Is Trying to Do!

A REVIEW of the work and accomplishments of the National Association of Photo-Lithographers gives you evidence of the value of associating together. May we take the liberty of pointing out how an industry, through the co-operation of a few leaders, was brought from chaos into order?

Probably the lowest economic point touched by the Photo Lithographic Industry was reached in the spring of 1933. Because of a depression the demand for photo-lithography had reached a deplorable level.

In the years 1930-1932 new concerns organized to take advantage of the business anticipated in the light of sales for 1928-1929. Some of these concerns were organized with very little capital, little or no business ability, and with nothing more than a willingness of those organizing the concern to work all hours of the day and night to establish themselves in the industry. Credit facilities had been curtailed to the vanishing point. Here then are many new concerns coming into the industry at its lowest level. With credit accommodations at the vanishing point and with sales extremely low, the prices obtained for the sales were therefore, low. Some concerns were operating long hours, paying ridiculously low wages, treating creditors with scant consideration, and producing a product inferior in every respect to that which was formerly produced in the industry.

Under this scheme of things, a wide-open cut-throat competition with "get the order at any price" ruled the industry. A record of the lowest prices quoted would put to shame the entire industry. Suffice it to say, they were far lower than reasonable average costs. A price war does not create good feeling. Quite the contrary, it creates bitterness and strife to a point beyond mention.

Few in the industry trusted each other enough to frankly discuss the problem of getting out of such a hole. To gather together all photo-lithographers and sit down and intelligently discuss trade practices and costs was entirely out of the question. One or two of the larger

concerns, at heavy expense, called in outside accountants to ask their advice on costs, but costs alone was not the answer. Regardless of how low costs are, they must be considered with relation to the costs of others in the industry. Lower costs were unreasonable and seemingly impossible. Employers, in some cases, were working without salaries; employees had been cut beyond reason, creditors, in up to their neck, found it necessary to play ball beyond the usual nine innings.

The first glimpse of light on these problems came as a result of National Recovery Legislation which suggested inoculating industry with a strong dose of applied common sense. We began to hear of cooperating as an industry under the NRA. Associations were to look into the question of members utilizing systems of adequate and uniform costs. The government, under the President's Reemployment Agreement, was to grant industry the right to raise wages, decrease working hours to provide jobs for those out of work, and increase price to take care of these added costs. Existing bank credits were also to be loosened up. All of this constructive endeavor was to be backed up by the Federal Government. President Roosevelt in this New Deal gave everyone high hope. Here, indeed, was a real opportunity to bring order out of chaos.

Consider if you will, the proposition of bringing the photo-lithographic industry from the lowest level of its existence to a level where all should be able to profit from being a part of the industry. Why, that would require ages, and who would ever be able to harmonize all of the discordant elements in the business, were the comments heard on every hand.

The first meetings of photo-lithographers gave evidence of the distrust and bitterness in the industry. The very life blood of many of those who gathered in these meetings depended on the plants they operated. Many months of fighting to hold on under competition so ruinous that it could not last much longer had created a feeling which had settled deep down under the surface.

(Continued on page 76)



Don't Talk Politics

A Few Epigrams on a Timely Subject

By
George M. Davison, Jr.

"Now is the time for all good men to come to the aid of their party," but . . . don't talk about it before your customers.

Politics and business are like oil and water. They don't mix, no matter how you shake them. And the wary salesman is not taking on any new experiments in social chemistry.

These are days when seller and customer must be cautious of political squabble and business "political incompatibility."

Politics is not like the condition of the weather, where you dismiss it with a sentence. Once the subject is started and the suggestions of current newspaper and radio comments parade themselves in conversational route marches back and forth between you and your customer. This is where dissension and differences get in its fine handy work.

To indulge in any form of political comment or discussion with a customer is indulgence on the part of a salesman and represents in a form of luxury, that may result in business indigestion.

While not all customers or prospects have a passion for politics; nevertheless, a salesman is like a ship running into a harbor during war time. A good captain is on the alert and constantly sounds for hidden mines. The harbor is the prospect's office and the hidden mines under

the placid waters of your prospect or customers calm demeanor may be political mines, which a loose tongue or an ill considered remark or glib disregard of his political views may set off into a political explosion, which you have never encountered in your business.

There will be occasions and many of them in the three months ahead, where a situation or a comment or, even a word will prime you for an expression of your opinion. Don't do it. Here is where it will cost you all your self restraint and self discipline to tactfully evade, or substitute some other subject of conversation in place of the "political."

If the prospect or customer is rabid or extremely partisan in his political views and wishes at the same time to be audible about them, one can see no harm in a salesman courteously and patiently listening and when the right moment arrives, with due consideration and politeness bring up the subject of his business.

If the prospect wishes to dissertate on his favorite candidate and his policies, you will be rewarded by adhering to the axiom: "Speech is silver, Silence is gold." Your customer will compare your restraint in this matter by favorably comparing you with your audible and more verbose competitors.

A salesman's political views are his own business and if he is wise and silent, the chances are no customer

(Continued on page 40)

Choosing the Paper for the Job

by Frank Howley



IN choosing the paper for an advertising job, the smart buyer can use paper to *save* money or to *make* money. It happens that in this year, the greater opportunities lie in the direction of *making* money.

The saving money game has been worked to death in the past few years. When direct advertising was being sent out with only a half-hearted hope that it would accomplish anything, it was only natural that buyers should think in terms of cutting down every cost factor in production. It's now the line of greatest resistance.

As a result of the pressure on paper prices, the makers of papers are today offering unheard of quality at unheard of low prices.

While there is still a range of papers from below 10c. a lb. to more than \$1.00 a lb., chief interest centers about those papers approaching 20c. These compare very favorably with papers which ten years ago sold for twice that figure. The paper industry has accomplished the same miracle as the automobile industry which has succeeded in giving a better car for \$700.00 than it could offer a few years ago for \$1400.00.

There is, therefore, little use in attempting to drive down the quality

of paper in order to save a few cents. The price has already been stripped to the bone. We get more than our money's worth.

Road to Profit

The better opportunity, the easier road to profit, is that of increased resultfulness from advertising—accomplished by using paper as a *selling* power.

Paper's Important Part

There should be no need to mention the importance of paper to printing. Yet we who are concerned with merchandising, copy, art, plates, methods of reproduction, and dozens of other details, continually need to be reminded. It is too easy to forget the importance of paper.

Paper can make the difference between blurry, spotty reproduction of photographs, and clear-cut, convincing, faithful reproduction.

Paper can extend the selling age of our catalogs from 12 months to 18 months; can keep them crisp, respectable salesmen instead of dog-eared, mused-up derelicts.

Paper can cause a mailing piece to stay in the customer's hands until read rather than be hurriedly cast aside.

A few years ago it was a smart buyer who could save \$25.00 on paper with only slight injury to the effectiveness of an advertisement. Today it is a smarter buyer who adds \$25.00 and increases the effectiveness by \$100.00 or more. The selling phase of the buyer's personality dominates. It is today good business to

pick paper with an eye to what it is to accomplish.

Typical Advertisement System

Many agencies, manufacturers and other large buyers of direct advertising employ the "Typical case" system. The buyer thinks through the future life of a typical one of the mailing pieces. In the case of a catalog, he asks himself, "Does the reader want it or must he be coaxed into receiving it? How long will it last? How long must it last before we get out another? Who reads it? Will it be filed or left on a desk in the sun? What is the reader accustomed to from former catalogs of ours and those of competitors?" These and numerous other questions, which in turn bring up other questions, pass through his mind. Their solution is greatly aided by even an elementary knowledge of paper.

Paper Factors to Consider

COATED PAPERS

In choosing a coated paper to do a job, the most important thing is printability. This is something which only printing can prove. The buyer can, however, see certain qualities and can choose to suit his need. There is the matter of dull coated vs. glossy. Dull has the advantage of giving soft reproduction and being easy on the eyes. Glossy has the ability to give extraordinary photographic accuracy to halftones.

There are blue-whites and whites which lean toward the ivory. Innumerable demonstrations are mailed out by the paper makers to extol the bril-



liance of halftones printed on white, and the mellow charm of the same halftones printed on cream white.

Folding

Coated papers, generally speaking, are papers which are coated with clay. When a sheet is folded there is always the possibility that this surface, if dry, will chip off. If the fold happens to go through a photograph, harm is done. It's well to check the folding quality of any coated paper. Special care must be taken on broad-sides and on giant flat displays which have to be folded down for mailing.

Cleaness

Frequently the difference between a good coated and a poor coated is the absence or presence of dirt spots. A few specks more or less may make no difference, but it is well to be cautious if the subject matter reproduced would be weakened by the unexpected appearance of blemishes. It would be a foolish economy for a beauty cream advertiser to show an illustration of a girl's head with perfect skin except for a blemish or two caused by paper spots.

NON-COATED PAPERS

It is in the non-coated field that paper in itself offers the greatest selling power.

Color

If in doubt, it is well to leave this up to the artist. However, any creative man of sound judgment and good eye should be able to pick appealing colors from the innumerable attractive ones offered. It is hard to go astray on a good yellow, red, or blue. It is well to check carefully the more unusual ones. Black, for example, may not be black. It may be a blue-black or a green-black. The tendency one way or



another seems to increase with age.

If a color is expected to last many months, it is well to demand of the printer or paper agent information concerning the color's permanency. A mailing piece which has been on a desk for a week, half in the sun and half covered by another object, may bleach out and be as detracting to your sales message as a patch on a salesman's trousers.

Finish

Special finishes came into their own when advertising men desired to dress up cheap, flat papers. Every fine paper house now offers a great range of regular and special finishes, ranging from coarse masculine to delicate feminine, from dignified to bizarre. It's well to specify a sheet with a uniform finish on both sides. Otherwise the advertisement may be handicapped by a beautiful front with an ugly back.

Feel

There is selling power in a paper whose surface feels like the fuzz of a peach, providing you are selling coal or furnaces or some other product which might naturally benefit by your first sending a shiver down a man's back.

There is selling power in the soft feel of a fine rag paper when it directly converts itself into selling shirts or suggesting refinement.

There is selling vigor in the crisp crackle of a bond paper if a formal and business-like note is desired in your letterhead.

Papers are widely different in feel. Your fingers can help you choose paper and the inevitable result of proper paper selection is a gratifying impression of satisfaction on the part of the recipient.



Clarity

It is safe to say that the better the paper, the more important clarity becomes. The paper advertisers tell us to hold up their finest sheets to see the freedom from spots. It seldom is necessary to do this, for fine papers are generally so transparent that every imperfection shows whether it is on the surface or interior. Clarity is especially important on white papers. In bonds and writings, it is vital. It is the old story of a fly spot being unnoticed on a blue working shirt but impossible on the stiff white front of an evening dress.

Folding

Some fine papers will fold smoothly with the grain; others with or against the grain. The heavier the paper, the more need to make sure that there is no danger of folds producing ragged, finger-and-eye annoying edges. The safest check is to have actual dummies made and folded. Paper houses are glad to give this service.

Deluxe

Nothing will dress up a mailing piece like a deckle edge. It is to paper what engraving is to the calling card. It is the hallmark of the finest. It's handed down from the early days when all hand-made papers had deckle edges. The present-day good book and cover papers have light, feathery deckle edges produced by water jets cutting the edges of the paper as it is manufactured. Imitation deckles are made by ripping paper after it has been made. They're usually hard and attractive only to the uninitiated.

Strength

Every paper maker has a record of the tearing strength, folding strength and pop strength of its papers. It is well to check into these things if permanency is desired for any job. Some papers will fold only a few dozen

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Handling Office Routine in a Lithographic Plant

By Simon J. Worms
Public Accountant

A Comprehensive Review of the Many Details That Must Be Systematized for Efficient Shop Management

THE word "office" as used customarily refers to that part of an organization which handles and controls the detailed work relative to the proper management and control of that organization, for the purpose of making that organization progress in the ordinary trends of business enterprise. However, it may vary from a single individual performing the multitudinous duties involved in that organization pertaining to the office, to that of a group of several hundred people performing these varied assignments in a more specialized way.

In its essence, the functions of an office, whether large or small, are as follows:

1. To keep adequate accounting records to record in proper form the transactions which transpire and thus be in a position to determine the financial progress and position of that organization.
2. To purchase materials and supplies most advantageously for the proper execution of the orders received.
3. To aid materially in the development, improvement, and distribution of the product.
4. To control and plan the production of the product.
5. To promulgate general plans and general policies for the advancement of the establishment and provide the means for the execution of these plans and policies.

To accomplish these various functions, the office may be divided into the following general departments:

1. ACCOUNTING.
2. PURCHASING.
3. SELLING.
4. PRODUCTION.
5. GENERAL AND ADMINISTRATIVE.

I shall discuss each in turn to indicate the various duties which may be performed in each and all of which have a decided effect upon the proper management and control of the organization.

Accounting Department

To accomplish the primary purpose of the accounting department, the work in this department might be divided into the following subdivisions:

- a. BILLING.
- b. CREDITS AND COLLECTIONS.
- c. PAYMENTS.
- d. PETTY CASH.

- e. PAYROLL.
- f. ESTIMATES.

a. BILLING

A systematic method of billing should be installed in any office. This may take the form of billing on long sheets, using the original copy as the sales invoice and the duplicate copy as the sales record; or, it may be performed by the use of duplicate or triplicate invoices. In this case, the duplicate invoice may act as the sales book and the triplicate may be sent to the selling department for its records. Then, again, this function may be performed with the aid of accounting machines, such as the Burroughs and Moon-Hopkins machines, which make the invoice, sales record, and customer's statement in one operation.

Sales invoices should be rendered daily. Every shipment, whether it is only in partial fulfillment of an order, should be billed at the time of making the shipment. Every invoice should be checked, at least once, by a competent party, watching carefully the quantities mentioned thereon, the prices, the extensions, and the terms.

The billings are based upon the shipping records rendered by the shipping department. These records may take the form of shipping receipts, a list of outgoing shipments for the day, or indications on the individual job tickets, which may also be used in the production of the job.

b. CREDITS AND COLLECTIONS

The extension of credit to new customers and the limitation of the credit limit are some of the very important functions of the credit department. To properly execute this function, it is necessary for the credit department to work carefully and cooperatively. Its actions are as follows:

1. Upon the receipt of a new order, a careful check of the company's own records should be made to determine what the previous experience has been.
 2. Look up the company's rating in the rating book (Dun & Bradstreet). This will give you an intimation as to the size of the prospective customer and whether any additional investigation will be required.
- Some of the factors which affect the scope of the investigation are:
1. Size of the order.
 2. Margin of profit.

3. Line of goods.
4. Probability of future business.
5. Credit standing of the customer.
6. Hazard in the industry.
7. Condition of business.

The scope of the investigation will be affected by the number of the above factors which are involved in the transaction.

Some of the sources of information for determining the credit standing of a customer are:

1. Mercantile agencies.
2. Banks.
3. Salesmen.
4. Attorneys.
5. Personal and trade investigations.
6. Financial statements.

Naturally, the scope of each investigation varies and not all of the above sources of information need be utilized. However, if a full credit file is desired, all these sources should be used in order to determine the proper credit limit. The credit files should be revised periodically so that they will reflect the current standing of a customer.

The matter of collections is an important one. Usually, a systematic method of following collections is the best plan. This systematic method may vary according to the size of the company.

The basis for the collection department's work is a list of the delinquent accounts submitted to it. This listing of the delinquencies should be submitted at least once a month. However, it may be submitted at more frequent intervals if the volume of accounts will justify it.

The methods for making collections may vary but a general systematic procedure such as the following may bring favorable results.

1. Mail a statement to the customer with a notation thereon, if delinquent.
2. If there is no response within a week, mail a polite letter to the customer notifying him of his delinquency.
3. Again, if there is no reply, mail another letter calling your customer's attention to the fact that you have not received any response to your original letter.
4. If there is no response to this second letter within a week, write a third letter threatening to draw a sight draft or to place the account for collection within a specified time.

It might be advisable at this time to communicate with the salesman who originally sold the customer and advise him of the status of the account. A personal call by him to the customer might result in a collection or a definite date of settlement of the account.

5. If no answer is received to the third letter, a telephone call upon the date given may aid in settling the account. However, if no satisfaction is received, the drawing of a sight draft is advisable.

6. If the sight draft does not produce any results, another letter or telephone call advising the customer

of your intended action to place the account with a recognized attorney, or collection agency.

Place a definite date of settlement upon the account and advise the salesman accordingly. Also, ask him to call again, if possible. If it is not paid by that date and the salesman cannot affect a settlement, a collection agency or recognized attorney will be the next step. However, this should be avoided wherever possible as it entails ill-feeling between customer and creditor, and involves considerable expense.

A card for each of the delinquents or a list of the delinquents may serve as the basis for these actions. As each step is taken, a notation should be placed on the card or list to indicate the progress on the account.

c. PAYMENTS

This subdivision of the accounting department has for its primary function the discounting of accounts payable.

The payment of accounts payable within the discount period is an important requisite within any organization. The discounting of invoices results in the saving of money for the company as well as increasing the credit standing of the organization.

However, if the invoices cannot be discounted, the payment of the invoices within the net term period should be fostered for the credit standing of the company will be greatly hindered if this is not done and may in some instances carry interest penalties.

A tickler file in which the invoices are placed according to their due dates may aid the office routine in the matter of paying the invoices.

d. PETTY CASH

Petty cash expenditures would come under the jurisdiction of the payments department. They should be kept at a minimum.

A favorable plan is to use the so-called revolving fund plan whereby a check for a definite sum is drawn and cashed. The responsibility for this sum is placed with one individual. Every time some of this money is expended, a properly authorized voucher must be presented. At the end of the week, the amount of cash and the amount of vouchers on hand should be reconciled with the original sum of cash given. Then, another check may be drawn for the amount of the vouchers presented. Thus, the petty cash fund will always be kept at a definite figure.

The vouchers for the expenditures should be authorized by a responsible party such as the office manager.

e. PAYROLL

The duty of determining the payroll may be detailed to one or more individuals. The usual procedure is to pay in cash weekly, but this may vary in the different organizations.

The basis for the payroll is the time cards, which the employees punch upon entering and leaving the establishment and for any overtime which may arise.

The rates to be paid are determined by the administrative department. These rates should be checked carefully by the payroll department to discover any discrepancies

which may exist or changes to take effect.

If the wages are paid in cash, a suitable receipt should be obtained from each employee for the receipt of the cash. The flap of the pay envelope may serve as the receipt, or a special form may be used.

If the payments are made by check, the check will serve as the receipt.

A record of all salaries and wages paid should be made in some suitable bound record. A time book may suffice or a regular payroll book. The following should be recorded in this book:

1. Employee's name.
2. Weekly wages.
3. Hourly rates for the computation of the weekly wage.
4. A column to indicate any deductions such as advances, loans, subscriptions to stock, insurance premiums, etc.
5. A column to indicate the federal payroll tax of 1% which is in effect.

This record will then serve as the basis at the end of the fiscal year for the determination of the federal payroll tax and may also be used as the basis for the insurance company's inspection of payrolls to determine the premium for the compensation insurance carried.

f. ESTIMATES

The primary function of this subdivision of the accounting department is to furnish the sales department with figures and prices for the inquiries which are brought in by the salesmen.

These figures are computed from the cost records received from the various departments, previous records of experience on similar jobs, quotations on supplies from supply houses, cost tickets, and general estimates.

In order to properly estimate on a job, this department must gather all the pertinent information and assimilate it so that a figure may be ascertained which will reflect the true cost of the proposed order and at the same time result in a reasonable profit.

Purchasing Department

The function of this department is to purchase materials and supplies most advantageously for the proper execution of the orders received.

In a large organization, the buying power may be delegated to several persons, each specializing in a particular field of buying. However, in the smaller companies, the buying may be done by one or two people.

The well organized purchasing department usually has an information file in which is recorded on small file cards the names of the various suppliers of the different products. For instance, there may be a card of which the caption is "Lithographic Plates" or "Transfer Supplies." Under this caption, would be a list of the houses which can supply these products. The names of these supply houses may be obtained from the various trade magazines such as the Photo Lithographer, Buyers' Guide Book, or they may be obtained from advertising mail literature.

These cards may be cross indexed in that the names of the various supply houses may be listed as the caption of the card and the products which they carry may be listed thereunder. For instance, in addition to having the various products listed, there may be cards for Fuchs & Lang Mfg. Co., Senefelder Co., Roberts & Porter and on these cards will be detailed the various products which these houses are capable of supplying. Thus, when the purchasing agent consults these files, he has a double index to utilize.

The purchasing agent's action is based upon a material requisition, which may be issued by the stores clerk, or by the factory superintendent, or by the production department superintendent. Upon receipt of this requisition, the purchasing agent may scrutinize a file index to determine when he last purchased this product, from whom he purchased it, and the price paid.

The agent will then ask for bids on the materials desired from the previous supplier as well as the new sources of supply which he may have on file. Upon the basis of these bids, and weighing the other factors of the purchase such as the delivery date, type of house which will supply the material, terms, and F.O.B. point, the agent will upon due consideration order the material.

The purchasing agent may then indicate on an index card again, for future reference, the date of the purchase, the name of the supplier and the price at which the order was given.

A factor which the purchasing agent should bear in mind is that it is not a wise policy to spread the purchases amongst too many houses. The spreading of credit in this way has the effect of reducing the credit standing of the house in the eyes of the supply world.

The purchasing agent may deem it advisable to purchase in larger quantities than what the requisition called for in order to secure a better price and thus contract for future deliveries, or withdrawals against a contract. The considerations determining this action are all factors dependent upon the peculiarities of the product within the company. Some of these considerations are the yearly supply of the article, the present price of the article (if advantageous), the present market and probable market, and the propositions offered by the suppliers.

Selling Department

The purpose of this department is to aid materially in the development, improvement and distribution of the product. To attain this end, the sales department might be divided into the following subdivisions:

- a. Sales promotion work.
- b. Control of salesmen.

Every organization should have some form of sales promotion work. This may take the form of a blotter sent out periodically, advertising in trade magazines such as Modern Packaging, Photo Lithographer, Mida's Criterion and National Bottlers' Gazette, or by means of direct mail solicitation.

Lists of new companies or new corporations may serve

(Continued on page 64)

For Modern Efficiency ...
and
Results that Build Sales

Eastman Supplies for the Graphic Arts



Eastman Transmission and Reflection Densitometer

NOW you needn't guess! You can actually measure and know your "values." Use the Eastman Transmission and Reflection Densitometer to examine originals, continuous-tone or screen negatives and positives. A precise, accurate instrument, too, for checking press sheets or single-color proofs for the strength and amount of inks they are carrying.

Essential in the Modern Masking Method of Correct Color Reproduction. Measures densities by transmitted or reflected light, as the subject demands. This instrument is an investment that will readily pay for itself. Ask your dealer for details.

Kodalith Orthochromatic Film



KODALITH Orthochromatic Film gives contrasty negatives from even the most difficult colored subjects. Its non-halation backing offers unusual advantages in halftone and fine line work. Of special interest to photolithographers, because it permits making contact screen positives. Standard-size sheets, and rolls up to 48 inches.

Kodalith Stripping Film Normal



DOES away with the uncertainty and bother of the plate-pouring method. Speedy, convenient, efficient, Kodalith Stripping Film saves time and effort in negative making. Gives uniformly satisfactory results. No special lighting required. Arc lights and usual standard equipment are adequate. An Eastman technician will demonstrate Kodalith on request.

EASTMAN KODAK CO., *Graphic Arts Dept.,* Rochester, N. Y.

Don't Talk Politics

(Continued from page 33)

will penetrate or try to probe his political reticence.

If a customer does ask you *point blank* about your political affiliations, it is well to realize that you may be on the spot and are handling a "hot potato." One can tactfully say that they are making up their minds and anything that the customer says may help to enlighten you on making a decision, then quickly switch the conversation to business.

You can't have your cake and eat it, and you can't have your customer and at the same time eat your business cake. Feed 'em cake, if you must, but not political cake.

You may say that all this is all right where you don't know your customer, but with "Bill," that's different. I know Bill So-n-So and he knows me. Ah, right there is where you are skating on thin ice and if you are listening, you can hear the ice cracking. Being close and friendly to an account may be the very conditions that may result in an indifference to the importance of this danger. Bill may keep a dead pan to your political comments, but, the auditor at the end of the month may not be so non-committal.

It is better to be well informed about your product than who will be the next president, for a salesman that is too well informed and too well read on politics, and conversant about politics is liable to be tempted to air his knowledge.

After all, the same sources of information, the newspapers, radio and magazines are just as available to your prospect as they are to you. Crystallization of

opinion does not come from any chance irrelevant comment on a political question from a tactless salesman.

The best politics is to stick to your own proposition to such a degree that there is no time for the insidious intrusion of politics to engage ones attention.

The average business mans day is all too short, without complicating it and shortening it with politics.

Harris Seybold Potter Host at Exposition

During Lithographers' Day at the Great Lakes Exposition, Cleveland, August 22, Lithographers throughout the country were guests of the Harris Seybold Potter Company. H. A. Porter, vice president in charge of sales, was host to large groups attending from St. Louis, Chicago, Joliet, New York, Cleveland and vicinity.

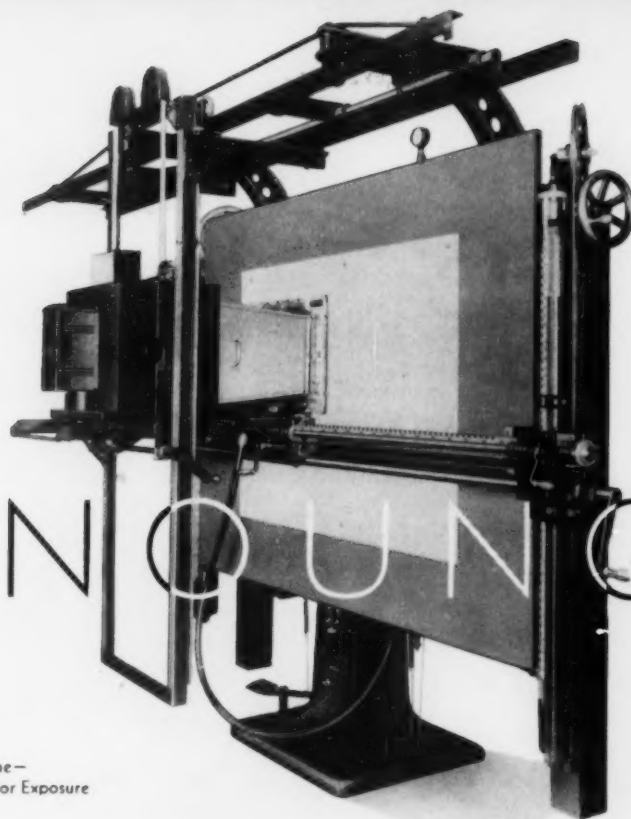
The largest visiting delegation was the entire membership of the Litho Club of Chicago who came in a private car. After breakfast at the Hollenden Hotel—Cleveland—special chartered busses took the visitors to the Harris plant where the new 42 x 58 inch LSK two-color offset press with revolutionaty stream feeder was inspected in operation.

After the factory tour and the taking of the group picture shown here, a party of one hundred and twenty were luncheon guests of Mr. Porter's friend and former lithographer, Mr. Jack Harris, President of the Forest City Brewery. From luncheon the party next visited the Harris booth at the Exposition where they inspected the running by the staff of the Crane-Howard Lithograph Company, of a two-color job on one of the two Harris exposition presses—a two-color GT 41 x 54 inch.

At 6 o'clock in the evening the entire lithographers group were dinner guests of Mr. Porter at the Admiralty Club on the Show Boat of the Exposition.



ANNOUNCING



M-H Vertical Photo-Composing Machine—
Negative Holder and Lamp in Position For Exposure

The New Monotype-Huebner **VERTICAL PHOTO-COMPOSING MACHINE**

With Non-Embossing Negative Holder and Universal Register Device

- ACCURACY IN POSITIONING THE IMAGE
- CONVENIENCE IN OPERATION
- SIMPLICITY OF DESIGN AND STURDY CONSTRUCTION
- HIGH SPEED IN PRODUCTION
- PLATES OF BEST QUALITY

This machine has been designed for the special purpose of securing close precision in registering negatives for single- and multiple-color process work in lithographic offset and gravure plate-making. Accuracy in positioning images for color plates and step-and-repeat work is assured by the precision "notch bar" measuring system, the use of hardened and ground steel micrometer screws for final adjustment into position and the rigid all-metal construction. Convenience in operation and means for easy handling and positioning of Negative Holders result in high speed in producing both single exposures and the finished plate. Simplicity in design, all-metal construction, highly skilled workmanship in build-

ing the machine, and first-class fully tested materials contribute to ease of operation, long life and freedom from maladjustment. The M-H Vertical Photo-Composing Machine will make plates of much higher quality in much less time than any other photo-composing machine.

MADE IN THREE SIZES

	Size of Platen	Work Area
Model M-H 2.....	44 x 50"	30 x 43"
Model M-H 3.....	58 x 68"	41 x 54"
Model M-H 4.....	64 x 80"	46 x 68"

Illustrated Folder and Complete Details Sent on Request

MONOTYPE PHOTO-MECHANICAL EQUIPMENTS

M-H and M-D Photo-Composing Machines M-H Photo-Imposing System M-H Precision Layout Table
M-D Darkroom Vacuum Frames M-D Offset Proof Presses M-H and M-D Darkroom Cameras
M-H Vertical Plate-Coating Machine

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, TWENTY-FOURTH AT LOCUST STREET, PHILADELPHIA, PENNSYLVANIA

Composed in the Monotype Sans Serif Family

Rapid Plate-Coating



QUICK...
strong and sturdy

The quality of your press-plate actually begins with the whirler or plate-coating machine.

The evenness and dependability of your coating depend just as much on the whirler as on your care in compounding your formula. Consistency . . . perfect control of speeds . . . drying facilities—all must be dependable and certain.

The Wesel Whirler has direct-connected, geared-head motor drive; no friction drive. Variable speed regulator is electrically controlled. Ball-bearing construction, using a minimum of current.

Automatic air-circulating device that does not attract dust from outside—Rustless alloy steel drum (not tin). Aluminum alloy revolving table—

Convenient drain pipe connections for ease in installation. Washing spray and also perforated pipe for cleaning housing. All pipes of solid copper.

Genuine Chromalox drying system, assuring rapid and consistent preparation at minimum cost; pilot light signal.

Adjustable legs for uneven floors to assure a level position. All controls available from one position. Lid can be raised or lowered instantly and without effort.

Can be seen in our Chicago and New York Display Rooms.

WESEL MANUFACTURING COMPANY

Factory: SCRANTON, PENNSYLVANIA

NEW YORK: 408 4th Ave. • CHICAGO: 201 N. Wells Bldg. • SAN FRANCISCO: 431 Clay St.

PHOTO-COMPOSING

●Write us for information on the new Photo-Composing Machines. The entire machine is built into one integral unit: All electrical equipment, lighting system, and mechanism combined within a single machine, thus simplifying operation, control, and maintenance.

●Can be installed in a fraction of the time required by former machines.

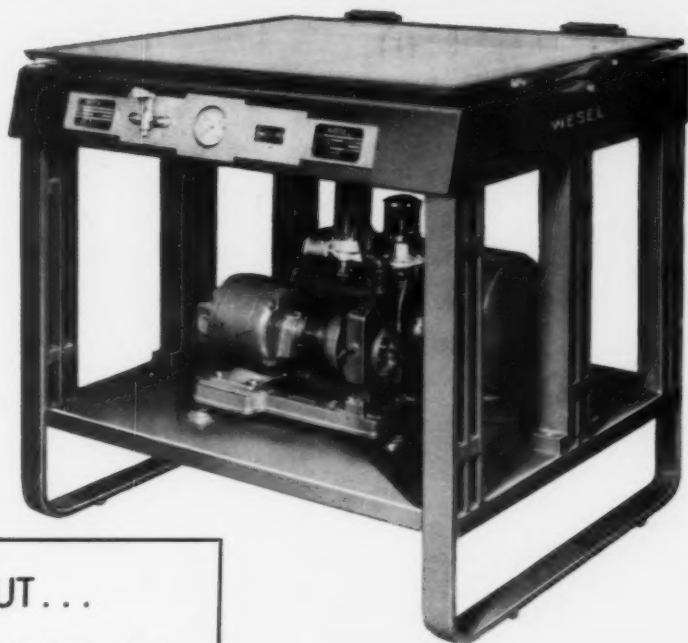
●The outstanding feature is simplicity of operation. Control of this machine is easily learned and mastered. Made in four standard sizes.

●We manufacture a complete line of offset plate-making equipment in all standard sizes, both large and small. Write for details on cameras, vacuum printing equipment, plate-coating machines, optical and lighting equipment.



WESEL

Automatic Vacuum Frame



ASK ABOUT...

- Wesel equipment for the complete offset plate-making plant. We furnish and install the complete plant, including every item of operating equipment.
- Over a hundred Wesel offset plate-making plants have been installed during recent months.
- Wesel offset equipment covers every standard specification — either large or small.
- Write us for information on all models and sizes of vacuum printing frames; all sizes of plate-coating machines; all models and sizes of process cameras in gallery or dark-room or over-head construction in either conventional or automatic design; photo-composing machines in four standard sizes; optical equipment and projection units, etc., etc.
- We will welcome your inquiry.



WESEL

CONTACT..

in two seconds!

You don't even have to turn on the electric switch. This new model Vacuum Printing Frame operates automatically! No fussing, fuming, fiddling and fidgiting with gadgets and controls . . . no clamps, hooks or fastenings of any kind whatever to be adjusted.

Contact in two seconds! The new vacuum reserve tank is automatic. The principle of operation is similar to an electric refrigerator. The automatic vacuum control operates the power plant of the printing frame with no attention whatever. Nothing to get out of order.

All-metal construction. Power plant ball-bearing; noiseless; smokeless and vibrationless, mounted on compression springs.


The rubber blanket is of a new heat-resisting composition, double pneumatic air bead, affording positive sealed contact. Made in two standard sizes: 24" x 30" and 30" x 42", the latter of which is counter-balanced. (We recommend our VPM model for those desiring sizes larger than 30" x 42".)

Write for particulars and prices. Can be seen in our Chicago and New York Display Rooms.

WESEL MANUFACTURING COMPANY

Factory: SCRANTON, PENNSYLVANIA

NEW YORK: 468 4th Ave. • CHICAGO: 201 N. Wells Bldg. • SAN FRANCISCO: 431 Clay St.



"What you mean black?"

Ah's black, Mistah!

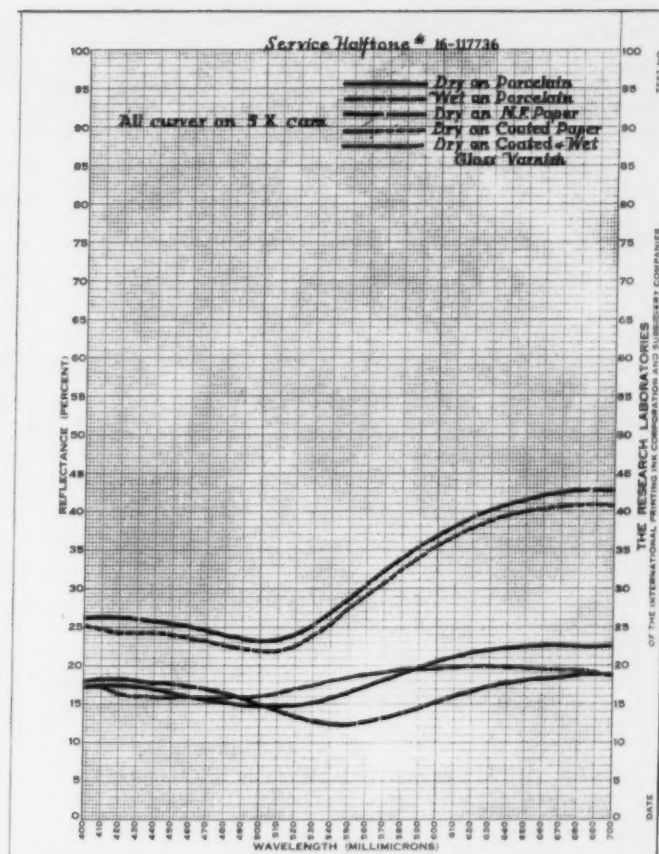
When is a black REALLY BLACK?

When a customer says, "I want a real black," what do you give him? A red-black, a blue-black, a green-black, a neutral-black?

Absolute black is non-existent, according to scientists. Black for reproduction is always tinged with other colors. Each of these different blacks has individual characteristics. Some are better adapted than others to meet various requirements. When your customer asks for a black, in all probability there is one particular black that will best meet the qualifications for his particular job. How can you give him that "best black"?

THE RIGHT BLACK FOR EACH JOB Using scientific methods of analysis and manufacture, IPI has classified the characteristics of the different blacks and determined which blacks are ideally suited for various uses. IPI color experts can help you pick the right blacks for each job—a black that stays black under all kinds of illumination; a black that blends with the other color tones in the design; a black that is permanent; or a black that won't scratch.

THIS RESEARCH HELPS YOU TURN OUT THE BEST WORK There is no place for guesswork in ink specification. IPI has developed the right blacks for each job. Let this research work for you—you can benefit from the discoveries and developments of the IPI Laboratories. By going to IPI for blacks, you make sure you are using the "right" color—the color that will make possible the best looking print job—the color that will please your customer.

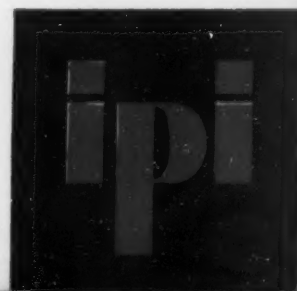


These mysterious lines (above) represent the characteristics of a reddish-black, as plotted by a new automatic color analyzer. This instrument, called the recording photoelectric spectrophotometer, scientifically analyzes and charts the characteristics of any color by means of a complex optical and photoelectric mechanism. The first commercial spectrophotometer is in service at the IPI Research Laboratories. By studying curves like those above, IPI research men have discovered hitherto unknown facts about the qualities of inks, black as well as colored. With this accurate and scientific basis for analysis and standardization, these technicians have been able to classify different blacks according to the uses for which each is best adapted.

THE INTERNATIONAL PRINTING INK CORPORATION

Atlanta Baltimore Battle Creek Boston Buffalo Chicago Cincinnati Cleveland Dallas Detroit Kalamazoo Kansas City Los Angeles
Milwaukee Minneapolis New Orleans New York City Philadelphia Richmond Rochester St. Louis San Francisco Washington

THE LITHOGRAPHIC PRODUCTS DIVISION of The International Printing Ink Corporation is a highly specialized department. In research, purchase of raw materials, manufacturing and service, the personnel of the IPI Lithographic Products Division specializes in the materials and methods which will give better service to the lithographic industry. The products of this division are backed by years of experience and research.



Snoop, Brother, Snoop!

A Salesman Must Stick His Nose Into Things in Order to Succeed

**By WILLIAM WOLFSON
Ardlee Service, Inc.**

SUPPOSE that you turned a street corner and saw a crowd gang up on a helpless, unarmed man who was being brutally beaten. You would be shocked at the merciless manner of manhandling, especially were you to witness an attacker deliberately draw back his leg and plant a terrible blow with his boot right in the groin.

Yet had you appeared on the scene a minute earlier it is quite possible you would have been one of the crowd; for the fellow being half-murdered had struck down an innocent, toddling child of three who happened accidentally to brush against him. We, therefore, must control thoughts and actions until all the facts are before us. What I am trying to bring out—and forcefully—is that certain behaviorisms ordinarily considered despicable are permissible under circumstances which justify.

Certainly, we do not need the psychologist's solemn declaration that people dislike those who poke into personal or business affairs not their own. Nevertheless, this is just what the salesman has to do. We all know how a "kibitzer" is regarded; we all feel the same towards an inquisitive, "nosey" individual; and we understand the resentment shown towards such pests.

But the salesman need not assume the out-and-out characteristics of such detested folk. A wide difference exists between the salesman who probes and the party whose dominant trait makes him annex himself to the affairs of others for no further reason. The practice of snooping can be made an art, can be done tactfully and subtly.

Not many years ago, most businesses were conducted in secret. By that I mean, methods of production, distribution and selling were zealously guarded. Officials of companies suffering losses rarely sought help but retired like a wounded animal into their dens and licked themselves. Even today executives are reluctant to impart details to salesmen and others capable of assisting them to solve their problems. They (or at least some of them) believe there is no other business like their own. True, any commercial enterprise—like every human—possesses its own personality. Nevertheless, like every human being, a business functions in known and defined ways.

Detailed facts cannot be held concealed and hidden from one who really wants to know. As stated, usual business procedure is standardized and recognized. Departures because of special fields or conditions can be determined through perusal of the particular trade papers or through application at other doors.

In this connection, let me give you a story told by John Caples, of Batten, Durstine & Osborn, Inc. in his book, "Advertising for Immediate Sales":

Two mail-order men were friendly and discussed

everything except what they deemed were their business secrets. One asked the other what type of advertisement pulled best, what publications were ideal. This information was refused. Whereupon the inquirer then stated he did not have to be told; that he had of late scrutinized all the magazines, torn out his friend's advertisements, noted in what publications they appeared, jotted down the cost of the space and other data; and watched closely the appeals incorporated in the advertisements.

He was aware that new selling appeals were tested in certain, low-priced space. Therefore, appeals thereafter appearing in expensive space were those that produced the most. Magazines used extensively were obviously the best. The best months to advertise were those when his friend advertised heaviest.

Mr. Caples climaxed this tale amusingly: "The other laughed. 'I'll let you in on one secret you didn't guess. I'm surprised that you started your analysis of my advertising results so recently. I've been checking up on your results for years!'"

Conceded that the gentle art of diplomatic snooping is essential to the salesman, what is it he must snoop for? A little thought and it appears that the man who sells must become a sort of Sherlock Holmes, capable and eager to dig out the fugitive and elusive order.

He must determine all the conceivable ways photo-offset lithography can be utilized. Not only must he consider the forms taken by the various pieces, but how they accomplish their purposes, and how they can be improved.

He dare not stop snooping once an account is landed. He must know whether he secures all the business. If he gets but combination runs, do other houses get the "tailor-mades"? Are such houses planographers or printers—and if other graphic arts producers, can he swing such business into photo-offset?

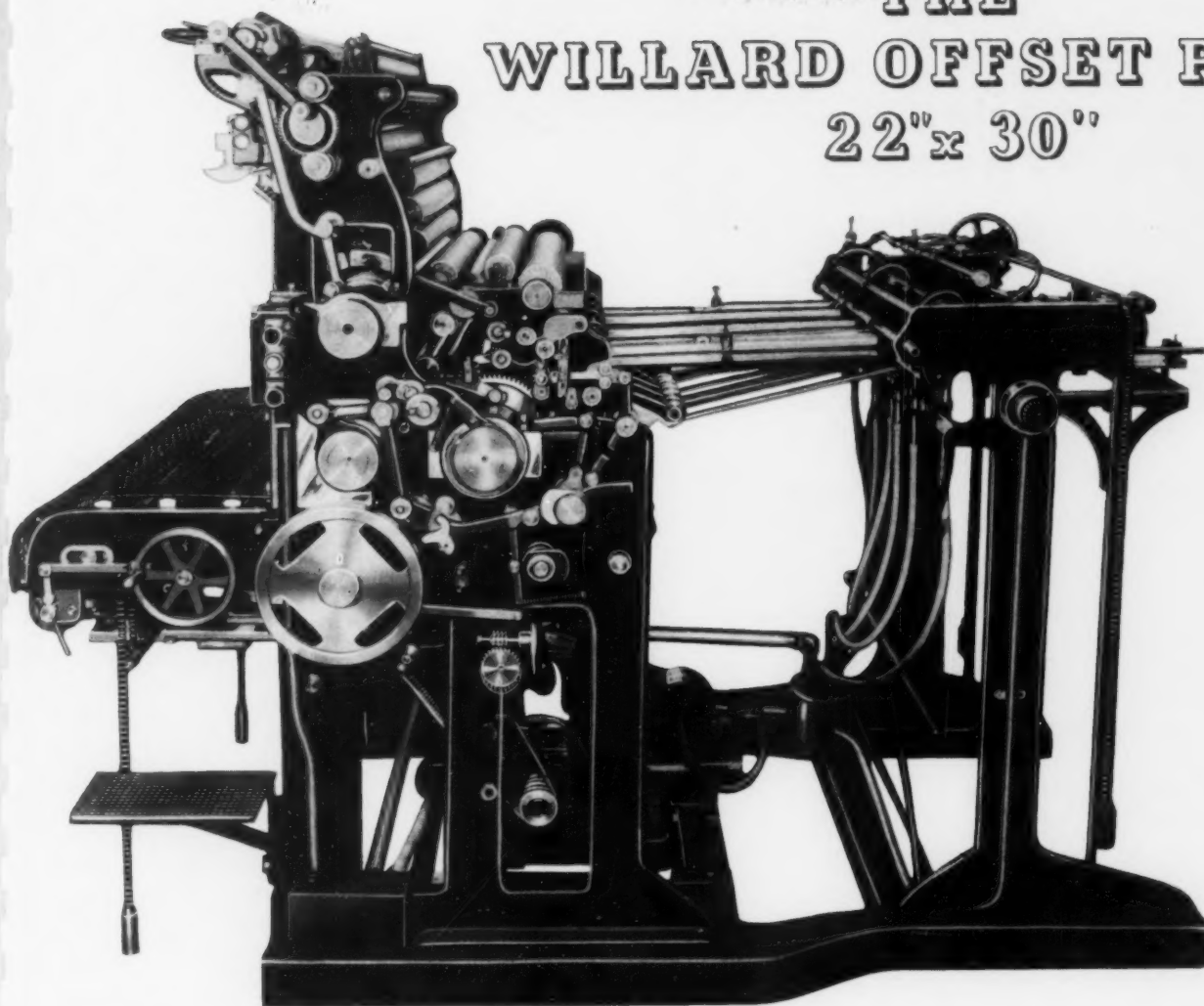
He must delve into the needs or requirements of his customer, whether apparent or not. How otherwise would he know whether the run on twenty-pound stock, priced around \$20, would materially benefit the customer is done in color and on finer paper, even though the cost would be \$200?

Often commission on an order can be made larger because the customer is shown he needs more copies than originally specified.

Some salesmen, through painstaking efforts, come to know one or several lines of businesses thoroughly. They then concentrate on these—and prosper. That is nothing new, only an adoption. There are business firms who specialize; and because they are so organized and so geared up they are able to offer wares or services at

(Continued on page 56)

THE WILLARD OFFSET PRESS 22"x 30"



Precision Built Perfect workmanship and materials, plus an engineering exactitude of high degree.

Exceptional Accessibility Designed to maintain maximum production hours. Free access to all working parts. Many adjustments can be made while press is in operation.

Extreme Simplicity Fewer working parts. Patented features and superb construction assures longevity as well as fine quality on monotone and color.

*Equipped with Dexter Feed and
built-in Baldwin Press Washer*

*Now offered for
October, 1936
Delivery*

WILLARD MANUFACTURING CORPORATION

Executive Offices

28 WEST 23rd STREET .

NEW YORK

How Photo-Lithographers Can Improve Their Product

With the price warfare considerably out of the way, the greatest other single handicap under which the industry is operating, is the inferior product turned out by some establishments.

Lack of skilled mechanical help and the desire of some firms to accept an order whether they are equipped to turn out the work or not has given many a buyer excuse for refusing to even interview photo-lithographic salesmen.

The photo-lithographic process has come far enough along the road now so there should be no excuse for sloppy, inferior work.

It is interesting to record that recently several photolithographers sat down together for the expressed purpose of discussing what can be done toward improving the quality of work produced in their plants. Some of the ways of improving the product are:

1. Engage competent mechanical help and pay adequate wages.
2. Use materials—films, paper, ink and supplies which spell quality.
3. Ask your camera man about the camera equipment. Spots, in the lense, poor focusing, improper solutions will spoil many jobs before you get started.
4. See that every plate is checked and double checked before it goes on the press. A good tuser earns profits.
5. Set a job in type whenever possible. Use type for heads and captions regularly.
6. Justify your retyped copy whenever possible. Varityped material often adds quality to a job.
7. Don't take a color job unless you are equipped to turn it out. Sell an extra color to your accounts whenever it can be done.
8. Standardize on the better grade of bond and offset paper.
9. Use ink which has been prepared for photo-lithographic work.
10. Make it a point to check the first sheet off the press for imposition, register and folding.
11. When you produce a good job, don't let a sloppy binder spoil it.
12. Turn down cheap work which does not produce a profit.
13. Turn out one or two advertising pieces which will help lift you above the mad scramble for unprofitable work.
14. Set a minimum charge for any job accepted. Save yourself from the loss incident to orders for 100 copies of an 8½ x 11 inch job.
15. Adopt a definite sales policy. See that your salesmen know quality, that they sell it and that they build accounts rather than sell orders.

Stick to a Price

Time was when the price of a given suit of clothes varied widely with the ability of various customers to beat down the price at which it was originally quoted. Subsequently a few of the more progressive spirits in the industry decided to charge the same price to everybody for any given suit. The public liked the idea and gradually the old policy of "sliding scale of prices" for the same merchandise became practically defunct, until now only the lowest strata of retailers conduct anything other than a one-price business.

A buyer of lithography prefers to deal with a one-price lithographer just as he prefers to buy his clothes at a one-price establishment. This may be rather difficult to believe in view of his occasional exhortations to "sharpen your pencil on this job—your price is way out of line," but the fact of the matter is that his experience in buying from the average lithographer has taught him that the price originally quoted is not always the lowest price at which a job can be obtained. He is simply attempting to determine whether or not you are to be placed in the same category with those lithographers who invariably set their price a little higher than it should be, with a view to cutting it down later at the customer's demand.

If you will figure your costs accurately, add a conservative profit, and stand or fall on your original figures, you will not only run a much better chance of standing than of falling, but you will gain the respect and confidence of the customer—a mighty valuable asset in the securing of his future business.

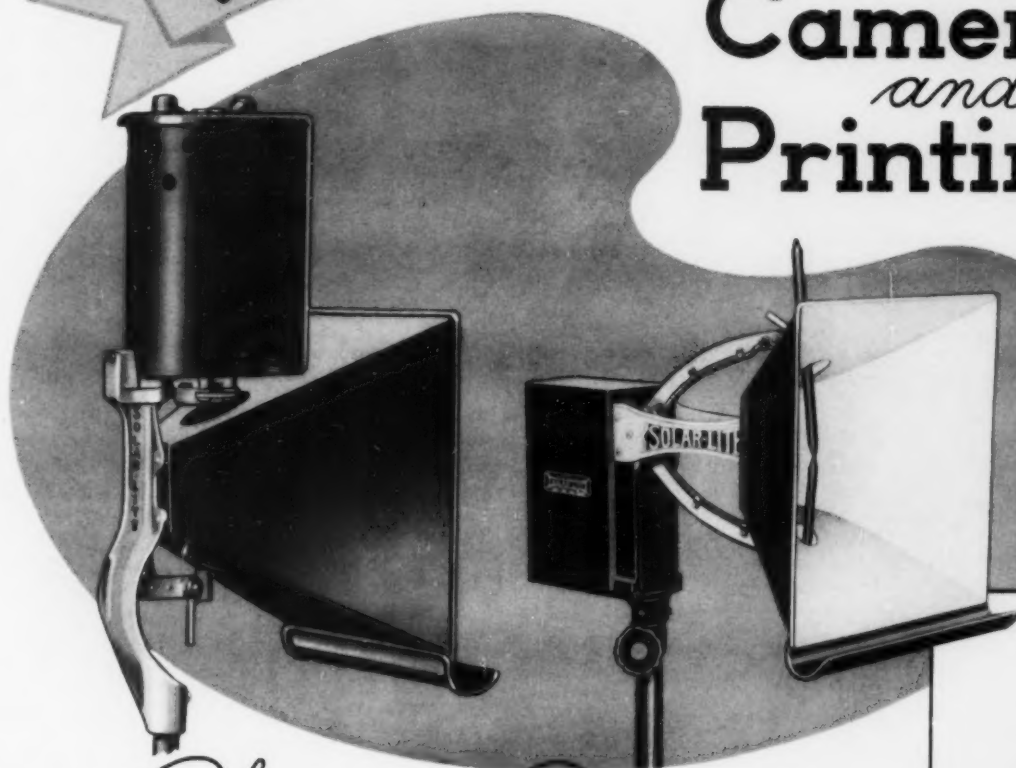
The time spent in haggling and beating down a price is a dead loss to the customer, and he will appreciate the privilege of dealing with a lithographer who quotes his best price first.

Of course there is a certain class of buyers who will attempt to beat down a price, no matter how low they know it to be. This is the type of man that picks out the lowest bid received, calls up the lithographer who submitted it and tells him that he "should like to give him the job, but there is another lithographer just a little lower—can't you shave your price a little in order that I can give you this job, as I should like to do?" Trying to lower a lithographer's price by referring to purely mythical competition is a practice all too common among this class of buyers, and often the lithographer who would have gotten the job anyway is bluffed into lowering his price to a point where he actually handles the business at a loss. The only safeguard against being bluffed out of all or part of your legitimate profit is to set a reasonable price on every job, and then stick to it.

Once you gain a reputation as a one-price printer, you will find few customers attempting to beat down your prices, more business will come your way and your relations with your customers will be mutually more pleasant and satisfactory. On the other hand, once you get into the practice of lowering your prices on request, you will find it very difficult to convince your customers that any price you quote is not subject to reduction, and you have fallen into the same unbusiness-like rut as the old-time clothing dealer.

Solar-Lite

Camera *and* Printing Arc Lamps



Left—The newer type SRK Lamp. Increasingly popular the past few years.

Right—The Meiers Lamp, favored for many years by the industry.

After 25 years
**Still the Choice of
the Graphic Arts**

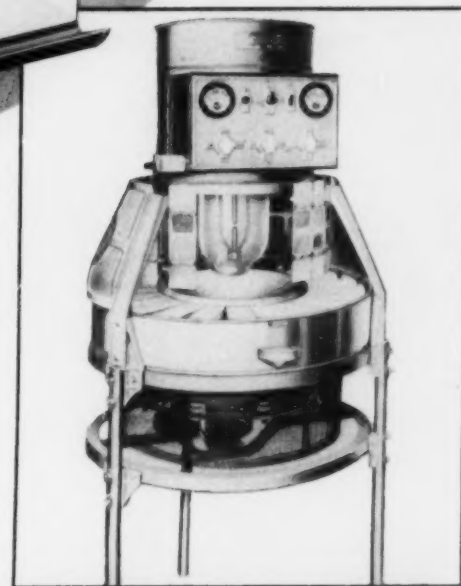
WHY does the lithographic industry continue to prefer SOLAR-LITES year after year — regardless of many attempts at imitations?

WHY?—because of their long life, uniformity of light, economy of operation, simplicity of construction and dependability of service. Some of the first Solar-Lites built many years ago are still giving their owners excellent service. The “floating arc” mechanism of both the Meiers and SRK types means constant uniformity of light through the longest exposures.

For horizontal overhead printing, our type ATL lamp is recommended. Ask about this newest of Solar-Lite arcs.

Write for literature and prices

ATLAS ELECTRIC DEVICES CO.
389 W. Superior St. Chicago



FADE-OMETER
MEASURES SUNLIGHT FADING

WILL YOUR INKS AND PAPER FADE?

Will sunlight alter the appearance of your color work too rapidly? Are you using the right combinations of inks and paper? Let the Fade-O-meter tell you in a few hours. Lithographers, ink makers and paper mills all over the world rely upon it.

Remington Noiseless



O. K., it's from
Remington Rand

BUFFALO

NEW YORK

CARBON RIBBON TYPEWRITER PREPARES

perfect **LITHOGRAPHIC COPY**

210 FOOT RIBBON REDUCES NUMBER OF CHANGES . . . TYPE STRIKES FRESH RIBBON SURFACE ON EACH IMPRESSION

For preparing copy for photolithography Remington Rand engineers have developed the Remington Noiseless Special Carbon Ribbon Typewriter.

This machine, used with Remtico Carbon Ribbon, produces typewritten copy that rivals copperplate engraving for clarity and sharpness.

As best results are secured when the ribbon is used only once over the same writing track, Remtico Carbon Ribbons are made 210 feet long to reduce the number of ribbon changes to a minimum. This requires an especially constructed machine.

The Remington Noiseless, because of its pressure printing principle and pressure regulating mechanism, is most satisfactory for this work. The Special Carbon Ribbon model is equipped with a special bail and bail lock which hold the metal photolithographic plate tightly against the cylinder.

Several points of pressure are taken off the type action so that the type touches the plate very lightly.

Punctuation marks are especially riveted on to the type bars so that they will not indent the plate.

Tension on the feed rolls is tightened.

The carbon ribbon is moved one full typing space at each stroke of the keys so that no two characters are struck on the same spot on the ribbon. The carriage may be moved back and forth without actuating the movement of the ribbon.

Remtico Carbon Ribbons are produced in two grades: for sharp impressions or extra sharp.

Call your nearest Remington Rand office today, or mail the coupon below for a free demonstration of this wonderful machine. Such a demonstration will place you under no obligation.

MAIL THIS COUPON FOR FREE DEMONSTRATION

REMINGTON RAND
BUFFALO, N. Y.

I am interested in seeing the advantages you claim for the Remington Noiseless Special Carbon Ribbon typewriter in the preparation of copy for offset printing.

Name _____

City _____

Address _____

State _____

Cantine's

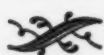


Byron G. Musser,
famous creative art
tion, using his Canti
men book. The Canti
ness, he says, "i
pinkish nor creamy,
blue . . . but clean
. . . gives the brilli
cut effect we all strive
was created by some
knows the require
modern graphic art

This section produced by lithography on Cantine's Zena Offset, C.2.S.—25 x 38—70 lb

COATED PAPERS

For Lithography and Photo Offset



● For jobs of outstanding beauty and effectiveness, use a Cantine Coated Paper. Created by an organization long familiar with the aims and needs of lithographers, Cantine Coated Papers give utmost satisfaction.

LITHOGLOSS—A high achievement in coated litho. Specially adapted for varnishing.
Coated one side.

ZENA LITHO. C. 1 S.—A fine diamond-blue white coated at medium price.

CATSKILL LITHO. C. 1 S.—A Cantine coated litho for low price on big production runs.

Samples on request. Or ask your distributor for a copy of The Book of Cantine's Coated Papers and Advertising Information.

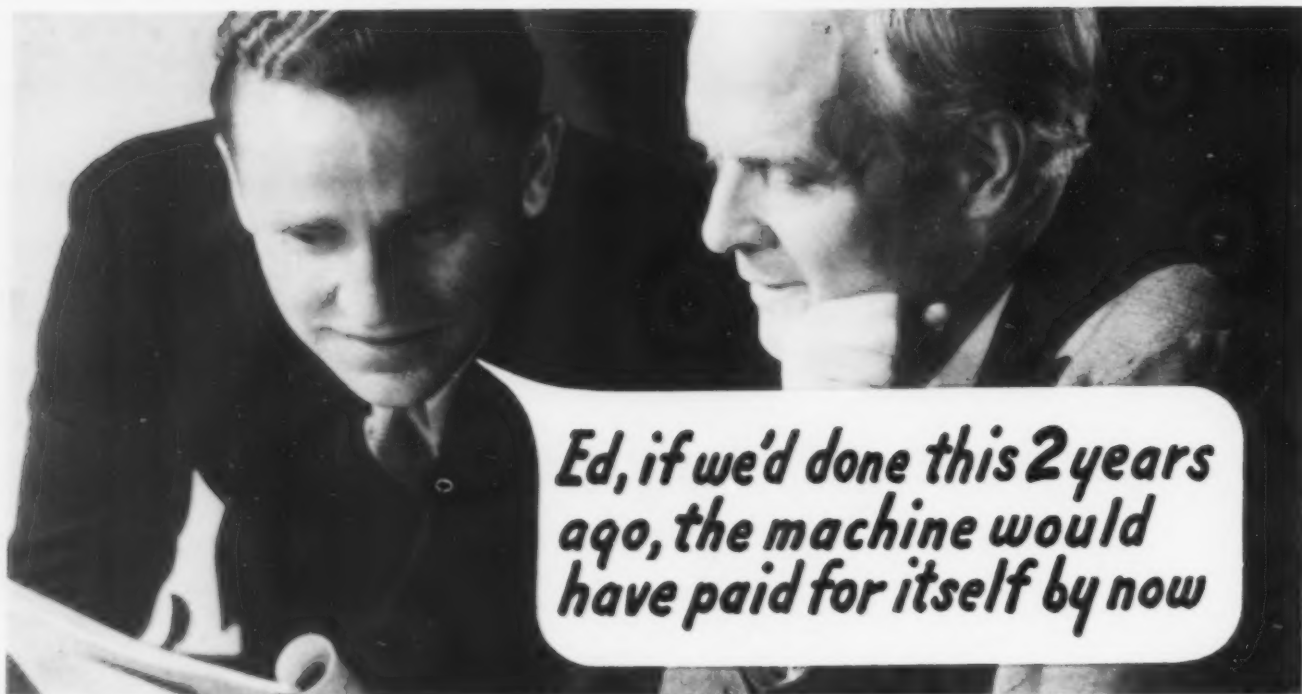
THE MARTIN CANTINE CO.

SAUGERTIES, N. Y.

Specialists in Coated Papers Since 1888

NEW YORK OFFICE: 41 PARK ROW

PHONE: BArcley 7-3662



UNBIASED SURVEYS REVEAL

startling facts ABOUT bronzing costs

*TYPICAL PLANT CONDITIONS

One or more of these surveys will come pretty close to home—regardless of the class and volume of work you handle.

Plant A—18 running hours a day on labels—direct comparison of costs with competitive bronzer. Annual saving over \$5,000.

Plant B—Running one-fourth of full time on greeting cards and labels. Hourly production doubled—annual saving over \$4,000.

Plant C—Can labels. 20% increase in production. Annual saving \$2,979.84.

Plant D—Calendar work on cardboard and paper. Average cost per M impressions: \$3.85 and \$2.72 on cardboard and paper respectively.

Plant E—Average production of 2,518 sheets per running hour on labels, cartons, posters, etc. Operated 70.1 days per year—\$2,372.18 annual saving.

Plant F—Label work. Bronzer produces approximately 3,000 sheets per hour. Reduces costs 37.7% compared with former equipment.

Plant G—Labels and cards. 46.6% increase in production. Annual saving of \$3,380.52 on only 156 days of operation.

Plant H—Cost on label work reduced 32.9% per M impressions. Saves \$1,712 annually, operating only 100 days per year.

Plant I—Can labels. Normal operating speed of 3,000 impressions per hour. Saves \$1.76 per hour, or \$4,359.56 annually.

Plant J—Operating speed of 2,800 impressions per hour on labels, posters, and calendars. Annual saving over \$2,800.

If we told you that one plant saved \$5500 in a single year by installing a Christensen High-Speed Bronzer, you might not believe us. But when we hand you a detailed report—prepared by an unbiased engineering firm of national reputation, based on the plants own records, and certified by both the engineers and a responsible plant executive—you can't help believing

it! * That is exactly the information we now have available, on 10 plants representing a true cross-section of the industry. Whether you run a bronzer part-time or full-time—whether you specialize on one class of work or another—you will find a survey to fit your conditions. Check the list at the left—then mail the coupon for your copies. This information will astonish you.

CHRISTENSEN HIGH-SPEED BRONZER



The Christensen Machine Company
600 Fourth Street, Racine, Wis.

Without obligation, send me certified copies of Bronzer Performance Surveys covering conditions at the plants I have checked:

Plant ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☐ J

Name _____ Position _____

Company _____

Address _____

City _____ State _____

Paper

(Continued from page 34)

times before giving way; others, many thousands. Some will tear with the readiness of a newspaper; others will resist two-handed pulling. Some, when dry, will crumble under pressure like an eggshell; others would break your thumbnail before allowing it to be poked through them.

Permanence

Permanence depends, to some extent, upon the above factors, but in addition to the paper's ability to resist destruction from forces within itself. The use of rags, plus careful manufacture, is still the best guarantee, though great strides have been made in extending the probable life of papers made from wood. Artificial aging machines can tell you in advance the probable length of life of any paper.

Getting a Background

A background for paper specifications can be gained within six months, by getting on the mailing lists of 2 or 3 leading paper manufacturers, by getting acquainted with local paper agents, by asking printers about this important phase of their business.

Files

It is practical to keep a permanent reference file into which go sample books and line books. From these, paper can be ordered. A second file should be kept for ideas on color combinations, interesting processes, illustrative treatment, novel folds, and paper uses. Materials not fitting into the reference or idea classification had best be read and thrown away; otherwise they only confuse by cluttering up the files.

In the Final Analysis

We who create and buy printing are in the final analysis responsible for results. Paper can increase results. It should be studied, kept in mind, and used wisely. Only in this way can we get full value for every dollar we spend for our advertising.

Type Proofs for Reproduction

(Continued from page 25)

Contrary to popular belief the paper should not be white, but ivory or, if possible, a blue that will not photograph.

Have you ever tried to look at the edge of a dark object with a bright light behind it, and realized how indefinite the edge was? When the camera lens looks at the sharp edge of black type against white paper, the same effect occurs. By toning down the back-ground, with a color that will not interfere with the density of the photographic negative, the certainty of sharp type will be greatly increased.

Perhaps some day a paper manufacturer will realize the possibilities and make a paper especially for reproduction proofs.

Hundred or hundred and twenty pound stacks, if obtainable in the proper surface and tone are recommended; the heavy weight keeps the paper stiffer in use.

Photographers should handle proofs with extreme care so as not to cause wrinkles in the sheet.

Buyers of printing, as well as type setters and printers, should be familiar with these important steps and insist upon their being adhered to by the organizations doing their work—for the results will be well worth the added effort.

No reproduction—be it type or illustrative material—can be any better than the original copy that the camera picks up. This is an important axiom to keep in mind when handling this class of work.

Supplying the printer with proofs prepared in the manner described does not lessen his responsibility in carrying on. It gives him a long advantage in turning out a finer quality of work.

Of direct import to the photographer is this: Keep the focal length as short as possible without distortion. This will produce sharper negatives.

Lucky Strike Contest Called "Largest Ever"

That rolling stone known as "Your Hit Parade" achieved unbelievable bulk last month when new highs were chalked up in the Lucky Strike song sweepstakes. Starting from scratch, the contest pulled about 50,000 entries the first week. Eight weeks later the response reached almost 2,000,000 in a single week, with the end still not in sight.

The production side of the contest is probably as interesting as the merchandising effort itself. The printing and mailing operations involved are said to be the most expansive ever engaged in during an advertising contest. One floor of the company's building at 111 Fifth Avenue has been turned into a sorting, checking and entry filing department. A total of 46,000 square feet of additional floor space was needed for this work, and the contest is said to have brought direct employment to about 1300 men and women. In addition, several mailing houses and printers have been kept busy night and day with the details of the contest and several of these firms found it necessary to increase their quarters and help as a direct result of the business that came their way.

The largest number of cartoons distributed in a single week, up to the time we went to press, was 40,000—awarded, as you probably know, to those who select the three most popular songs of the week.

A SHINY red, white and blue railroad car will inaugurate the start of a nationwide tour in Grand Central Terminal on September 14th, when the "Printers' Progress Special" makes its debut. Housing a modern printing plant with all accessories, the Special is being sponsored by American Type Founders and fourteen cooperating companies.

Snoop, Brother, Snoop!

(Continued from page 46)

lower costs and of better quality than the houses who operate along general lines.

Now and then I have put this thought before new salesmen: "You must know some types of business intimately because of your past experience. Go after prospects in those fields." They follow this advice. Unfortunately, many of them fail. I know why. They did not do enough snooping previously.

Your pardon if I include a personal experience. At times I am called upon to do a bit of copywriting. A few weeks ago I wrote rather an unusual letter for a client. It was so out of the ordinary that he was afraid of it. But he showed it to some business acquaintances and they assured him it was alright—and he used it. The letter did not pull. He was convinced his first impression was right, and that the letter was all wrong.

Now I knew I had written a good letter. I submitted it to the criticism of a manufacturer in an allied line who declared it "exceptionally effective." I did the same with the head of an advertising agency who said it was "great." There was only one thing I could do to regain the confidence of my man. I snooped to conquer. And I discovered that the display advertisements he ran were in magazines read by men who could not be sold because the proposition was not for them.

Thus I stand self-convicted. I should have done my snooping before and not after. I could give a strong alibi. The fee I charged did not cover any extras, and I did deliver according to the letter of the contract. That is why many photo-offset salesmen do, too. Not enough! For instance, have any of you faced the irate customer who views a halftone job done on two sides of a twenty-pound sheet, and bawls you out for accepting his order at combination rates instead of making him take an individually handled job at a higher price?

So far we have looked at the customer only. What about prospects? In a fashion, every salesman snoops around to uncover leads. But not every one has a nose to pick up a faint scent. Incidentally, the thought strikes me here, that there is a further justification for this snooping business. You have often heard the expression, "He has a nose for news." That's one of the 'face' marks of a good reporter. That's also a prerequisite for a good salesman.

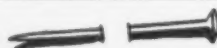
Most salesmen act like a pack of hounds at a fox hunt. The fox hunt is a merry one, quite democratic—all the salesmen of all the photo-offset houses join in. The fox, itself, is usually too obvious. Even so, the men must be urged on by loud yocks. The master-salesman will romp along too, but frequently you will find him running alone.

Just one example. A new corporation must have any number of things either printed or produced by photo-offset. But because the scent is too faint at first, if not outright misleading, the majority of salesmen drop it. There are dummy directors and officers. No business

address can be found, simply because no space has been rented. Sooner or later, there is an address—and a salesman out prospecting comes across it, or hies there on a tip—only to learn that another chap who has developed his snooping faculties is there firmly entrenched.

Would you sell more? Then snoop, brother, snoop!

THE ILLUSTRATED LETTER



The illustrated letter has these advantages in advertising and selling.

1st. It gets attention with letter mail. It is the habit with business men to give early and careful attention to letters.

2d. It enables the advertiser to cover briefly and quickly in letter form the broad sales points that arouse the interest of the prospect. And then having secured this interest to present on other pages in pictures and type a complete detailed story.

3d. If the illustrated letter is referred to another department or individual, none of the information it contains will be lost. It is all a part of the letter.

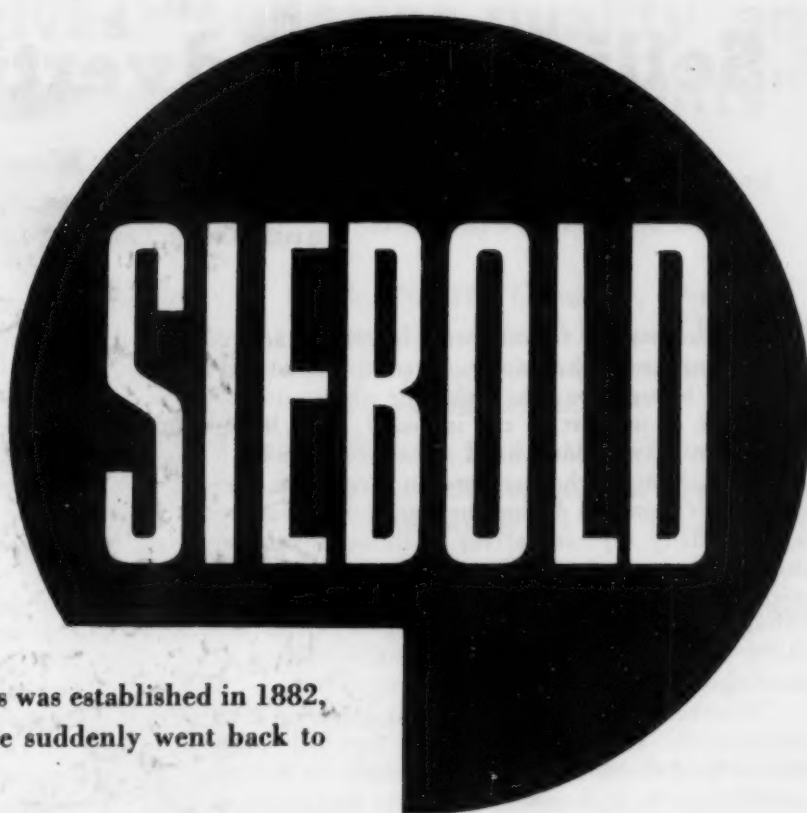
4th. If the illustrated letter is filed for future reference, all the information is together in one place. Nothing will be lost or detached.

5th. The illustrated letter saves the time of correspondents and stenographers. Because of the fact that the inside pages carry all the detail, the correspondent or stenographer needs only to write a short letter, leaving the telling of the rest of the story to succeeding pages.

Illustrated letters should be designed, of course, with some thought for the mailing and ultimate disposal. The standard filing size is 8½ x 11 and a letter size folded twice fits in the large correspondence envelope. But there are other sizes adaptable to certain uses. The size 7½ x 10½ is a professional size appropriate for correspondence with doctors and dentists. The size 5½ x 8½ is more suitable for letters offering products or services that are essentially personal. This size is particularly good when addressing women at their homes.

This interesting explanation of the place of the illustrated letter in the advertising picture is contained in "Impressions," monthly house organ issued by Intelligencer Printing Company, Lancaster, Pa. This firm uses the trade name "Econolith" for its photo-lithographic work.

A LOT CAN HAPPEN IN FIFTY THREE YEARS



The world has changed so much since Siebold's was established in 1882, that none of us would know how to act if we suddenly went back to those days.

But some things never change. 53 years of experience in serving the lithographic industry have not altered our original principle of offering the highest quality and finest service to every customer.

Every ink, every lithographic product we handle is backed by our own reputation. Offset Black, which has for 30 years been regarded as more or less of a problem, is no problem to us. We will gladly have our representative call and give you full details on the various Blacks we manufacture.

Siebold's roller department is fully equipped to supply your wants such as Smooth and Grain Leather Rollers, Moleton, and Muslin Covers, also full selection of Hand Rollers, both Rubber and Leather for transferers and prover's use. These are of our own manufacture and our 53 year old reputation is back of every one.

*Supply price list and Offset
Specimen Book upon request*

J. H. & G. B. SIEBOLD, INC.

Lithographer's Supplies

47 WATTS STREET, NEW YORK, N. Y. Phone WA lker 5-9474

OFFSET BLACKS · COLORS · SAFETY INKS · ROLLERS · MOLLETON · DAMPER COVERS · RUBBER BLANKETS

Selling the Advertising Agency

An Experienced Buyer Offers Some Critical Observations Regarding Offset Salesmen and Their Usual Methods

IT is illuminating to talk with buyers of advertising, printing and lithography. Recently a conversation with one brought out the following observations which should be of interest to the industry. This buyer said:

"It is mighty seldom that I am approached by a lithographic salesman who presents an intelligent, constructive solicitation and during the course of a year there are a good many representatives of lithographic establishments who seek the business of the advertising agency with which I am identified. The volume of printing and lithographing done under the direction of this agency is fairly large but the volume of business should have no bearing on this subject.

"Whether the account sought is large or small, the lithographic salesman should be fortified with some decidedly definite arguments to present in behalf of his establishment. It is surprising how so many salesmen can obtain any work whatever by just calling and inquiring whether or not a buyer is in the market. Bear in mind of course that this criticism is directed at the salesman who is making his first call, or at any rate a call on one who has never awarded him any work.

"My observations lead me to believe that only a few lithographic salesmen *KNOW* what they are talking about when they talk lithography. In all probability their lack of knowledge about lithography is to be attributed to the fact that they have never worked at the bench long enough to acquire more than a passing understanding of what lithography really amounts to, or it may be that the experience they have has been acquired in an establishment of poor standing or at any rate an institution that never contributed anything to the development of better lithography. A man's solicitation is certainly a reflection of this training. With the lack of experience in a good shop it logically follows that the salesman knows little or nothing of the allied trades of engraving, inks, paper stock, etc.

"To be sure it takes more than mere years of experience to enable a man to qualify as a lithographic salesman. The lithographer, like every other man, must continually read and study his text-books and trade papers to keep abreast of the times or he will just naturally 'go to seed.' The man who knows his business from A to Z is the man who commands the respect of all those who know him or know of him, and the lithographic salesman certainly has to know his business if he expects to increase his sales. The lithographer who has a thorough knowledge of his profession can go out and get new business with mighty little difficulty if he has any confidence in himself, and he will develop this new business simply because *HE KNOWS*. If he is a good talker and

knows something of up-to-date selling methods, he will obtain new accounts with just that much more ease. A buyer thoroughly enjoys being solicited by a lithographic salesman who is so steeped in his subject that he invariably has something new to tell, or to show, that concerns either his work or his shop—yes, there are such men.

"The man who *KNOWS* the subject of lithographing is not the type of salesman who comes in and says that he would like to be remembered now and then, or who appealingly asks for just a portion of the business. On the contrary, he is the type who can sell his institution as the one to be called upon in every instance when competitive bids are not necessary.

"There are advertising agencies who do not like to ask for competitive bids but such things are necessary evils when the clients of agencies request that work be awarded to the lowest bidder—consistent, of course, on a prompt-delivery basis. Many agencies believe in centralizing work in one shop.

"Far too few lithographic salesmen ever take pains to explain why their plant is equipped to satisfy, or to explain why their plant is entitled to consideration for color work, prompt delivery, lithographing and folding unusual broadsides, etc. Lithographic houses should have a rather well-defined, intensive training for the salesman. That such training is profitable for the manufacturer, salesman, and consumer has been well proved by the success of many big institutions, and surely lithographing is not a bit different from any other article so far as selling is concerned. So, unconstructive solicitations are not to be blamed entirely on the individual salesman, for the responsibility rests in a large measure upon the firms by whom the salesmen are employed. Perhaps they say nothing because there is nothing that can be said for their place! In that case they ought to get on the staff of some other institution, or sell out if it is the case of the owner who solicits.

"When a man comes into my office and can prove that his shop is unique owing to special equipment, pressmen of experience; or employees who have been understudies to men who enjoy a reputation of long standing for color work, who have been given some special training in that particular work; say a Planning Department or a battery of presses—one could go right on down the line detailing all the items that go to make a real lithographic house, but enough are mentioned to make the point clear—when a man can talk of one or more of these features as being the features which have given his house a reputation, then I feel that I am talking to a man who gives a constructive solicitation. In such a solicitation,

LITHALOID gives "superior quality and uniform results"

Says Indianapolis Blue Print and Lithograph Company, Inc.

Mr. S. H. Clendenin, President of Indianapolis Blue Print and Lithograph Company, Inc., Century Building, Indianapolis, Indiana, writes:

"We wish to thank you for the prompt shipment of the two gross of 20 x 24 Lithaloid paper which has just been received.

Also, we take this opportunity to compliment you on the superior quality and uniform results which it has been our privilege to obtain from Lithaloid during the past several years."

Users everywhere enthusiastically commend Lithaloid performance!

With Lithaloid, you reproduce fine lines sharply and with vivid contrast. Blacks are deep, solid, jet black. Whites are clear and brilliant. Develops in 1½ to 2 minutes with standard developers. Cuts necessary opaquing time to a minimum. Superb results in camera or printing frame. Orthochromatic or regular at standard prices. Let Lithaloid prove its superiority to you.

FREE TRIAL OFFER

We'll send you a difficult original, a Lithaloid negative of it, and a liberal test supply of Lithaloid. See if you can duplicate our negative with any other negative paper than Lithaloid.



LITHALOID PAPER

THE HALOID COMPANY

ROCHESTER, N. Y.



Boston Office.....141 Milk Street
Chicago Office.....608 So. Dearborn St.
Detroit Office.....149 Lafayette Blvd.
Los Angeles Office.....714 South Hill St.

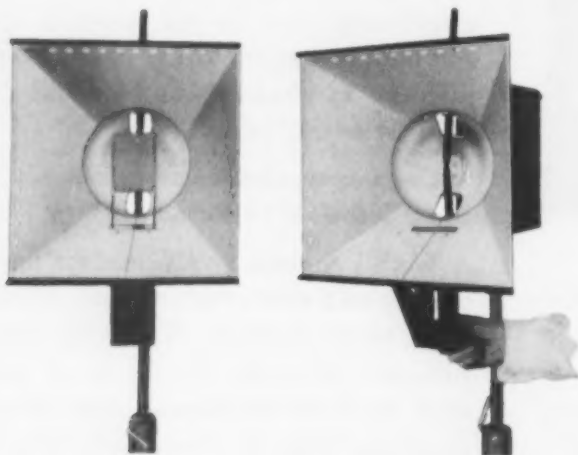
New York Office.....330 West 42nd St.
Philadelphia Office.....1015 Chestnut Street
San Francisco Office.....222 Kearny St.
Canadian Distributors, Instruments, Ltd., Ottawa

Texas and Oklahoma Distributor, Jno. J. Johnson, 1912 St. Paul St., Dallas, Texas

HORIZONTAL OR VERTICAL COPY BOARDS

THE UD5 set really handles both jobs. Vertical or horizontal copy board, top lighting, special effects, the type U is the World's most versatile, the real all-purpose lamp. Guaranteed by Macbeth, the oldest name in photo-lampdom.

SPECIAL NOTICE: All types of Macbeth lamps can be mounted with special gear on copy board, suspended or operated from floor, maintaining same distance from copy board to arcs at time of exposure.



**NEW MACBETH
ELECTIVE CLOSE-UP DIFFUSER**

The best answer to the diffuser, spot eliminator, reflection eliminator question. No shadows from diffuser frame.

If you want diffusers, push them up in place. If



**TYPE UD5
DOUBLE DECK SET**

you want direct light, pull down with finger tips and they disappear instantly.

All types of Macbeth lamps (except HR and HD horizontal types) may be equipped with these diffusers.

Macbeth

World's Standard Photo Lamps

MACBETH ARC LAMP CO.

885 North 28th Street, Philadelphia



Deep-Set **BLACK**

● **TROUBLE-FREE**_____

on unusually long runs

- That is the sum of the qualities that have established **ECLIPSE DEEP-SET BLACK** as a requirement in many of the largest lithographing houses in the United States.
- You may prove it on your own presses.
- Why not order a trial lot?

GAETJENS, BERGER & WIRTH, Inc.

60 COLUMBIA HEIGHTS
BROOKLYN, N. Y.

538 SOUTH CLARK STREET
CHICAGO, ILL.

Selling the Agency

(Continued from page 58)

concrete examples can be given of where the salesman's institution has proved to old clients that the equipment—either in machinery, men, or both—had been superior to that of competitors. Concrete illustrations will not only serve to drive the point home but what is more important they make the solicitation interesting.

"I think I am only human, however, when I back away from the braggadocio type. The salesman who makes extravagant claims about his shop is a good man *NOT* to patronize. This type of man forgets that 'to err is human.' Mistakes are bound to occur and particularly so in a lithographic establishment where there are many details to look after. It goes without saying that the only house that would employ such a salesman is the very worst offender when it comes to mistakes, poor service, tardy delivery, etc.

How Business Is Awarded

"Now that I have a good line on the lithographers in my locality I am mighty careful in awarding any business whatever to any others than those who have done work for me in the past. In the first place, dealing with new shops has invariably led to grief, and lots of it, for they do not know my ways, nor do I know theirs. Perhaps I am entirely to blame for not issuing instructions that cover every small detail, but I expect a lithographer to use his brains a little and take part of the burden of the detail off my shoulders. Would you call that passing the buck? But a more important reason for not patronizing new shops is that it is so entirely unjust to those men who have so faithfully, intelligently, and willingly served me in the past. When these men have given me the best they had to offer, then why should any consideration be given to strangers? All this leads to the point that it will require a strong solicitation and a constructive solicitation ever to win me over to the point of risking another chance on the new lithographer.

"Many of the salesmen are prone to insinuate that the work done for me by houses other than theirs is not up to the standard. But in only a few instances have they been able to get down to brass tacks and show just exactly what was lacking to make the work satisfactory, or in other words to define the standard. In a constructive solicitation, according to my classification, it would be the duty of the salesman not only to point out the weakness in my material done by the other house, but to show precisely what changes would be required to make the piece measure up to the highest standard and further to explain why such changes should be made.

"The only motive for giving out work to men whose solicitation is so woefully weak is that of sympathy in its most pure and unadulterated form. Work should never be given to such men for every buyer has too many friends in the lithographic business who do satisfactory work consistently."

U. T. A. Stresses Practical Subjects at Convention

Typical of the general excellence of the entire program that is being formulated for the Golden Jubilee Convention of the United Typothetae of America under the direction of George H. Cornelius, First Vice-President, and Chairman of the Convention Program Committee, is the Technical Session planned for Tuesday, September 29.

Eminent speakers will discuss a variety of subjects at the morning session. Then, in the afternoon, those same authorities will preside, each at a separate "clinic" or "round-table" discussion at which printers may sit about the tables, ask questions and have them answered. These clinic groups are to be arranged in one large room, but separated to avoid confusion, so men say, after getting detailed information at one place on one subject, proceed to another, for further information on another subject from the authority in that field.

Brass-tacks practicality is being stressed in all the arrangements in the belief that no printer who attends will need to leave without getting helpful information on whatever subject may be troubling him.

Current Trend of Paper Prices Points to Advances

The tendency toward higher prices for paper and cardboard was indicated by two announcements made during the past fortnight by leading manufacturers.

On August 3 the Falulah Paper Co., makers of Falpaco Coated Blanks at Fitchburg, Mass., announced an increase of from 12 to 18 per cent covering all of their grades. Champion Paper & Fibre Co., Hamilton, Ohio, also withdrew all prices on Miami and Falcon Coated Blanks, car sign blanks, coated railroad, plain blanks and railroad and on double patent coated sign board. New price schedules were to be sent out early this week.

Late in July a general advance was announced on all grades of blotting of approximately one-half cent per pound. This included plain, coated, offset and embossed brands as well as on inter-leaving.

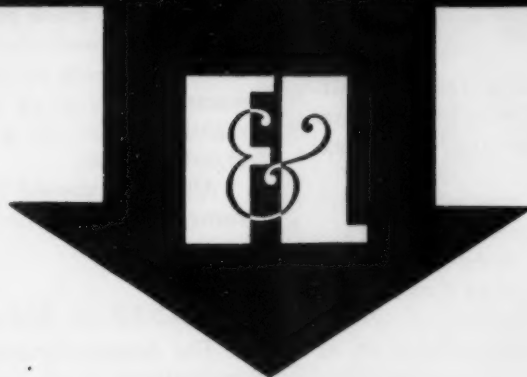
A general advance in all grades of blotting papers was likewise announced last month. Average price increase was $\frac{3}{4}$ c per pound.

Typing and Layout Catalog Is Issued by Gallant

Seven specialized services for photo-lithographers are illustrated and described in a catalog issued by Gallant Service, 81 W. Van Buren St., Chicago. The organization offers the following:

Typewriting, varityping, layout, lettering, ruled forms, art work and drafting. Actual specimens and full details are presented in the catalog.

FOLLOW THE TREND TOWARD



OFFSET BLACK

"The most intense black we have ever used, and we tried them all"

An unsolicited testimonial from one of the many prominent lithographers who have adopted this outstanding development. Its great concentration produces real dense solids without any loss of detail and sharpness in fine halftones - requires only a slight addition of F & L Dependable Dryer for thorough overnight drying on the majority of stocks. Make your own investigation - put a trial can on your press and watch it perform.

THE FUCHS & LANG MFG. COMPANY

ESTABLISHED 1870

DIVISION • GENERAL PRINTING INK CORPORATION

(EVERYTHING FOR THE LITHOGRAPHER)

100 SIXTH AVENUE • NEW YORK

BOSTON • CHICAGO • CINCINNATI • CLEVELAND • FORT WORTH
PHILADELPHIA • ST. LOUIS • SAN FRANCISCO • LOS ANGELES

Handling Office Routine

(Continued from page 38)

as outlets for lithographic products. Also, trade lists furnished by various agencies such as Boyd's lists, or lists supplied by the secretaries of the various trade organizations.

The sales department may aid in the matter of research work in that they can suggest by means of their contacts with customers as well as by their own personal observations, new ideas for the development of new and better products for a particular industry. Studies of the requirements of a particular industry may enable an organization to develop a lithographed product which is new in the field and which will greatly enhance the lithographic outlets in the future.

b. CONTROL OF SALESMEN

The matter of controlling the work of the salesmen should be delegated to the sales manager, preferably, or some other competent party. He should have complete supervision of the salesmen in all their actions. The exercise of this control may focus itself upon some of the following subjects:

- a. Determination of drawing account and limitation thereof.
- b. Extent of the commissions on various orders.
- c. Determination of prices on different jobs.
- d. General sales policies.
- e. Salesmen's territories.
- f. Reports and data required from the salesmen.

A brief discussion of these subjects may be advisable at this time.

a. DETERMINATION OF DRAWING ACCOUNT AND LIMITATION THEREOF

Insofar as the drawing account is concerned, a definite understanding at the beginning of relations, in writing, should be executed with the salesman regarding the extent of his drawings and the extent of the expenses to be allowed, if any.

b. EXTENT OF THE COMMISSIONS ON VARIOUS ORDERS

Regarding commissions, there should be a definite agreement as to exact amounts to be paid on the various accounts, or orders. The commissions may vary according to the type of order, the size of the order, and whether the order is from a new account or a house account. These commissions may vary in the amounts, the determination of which may be controlled by the individual house.

Commissions should be credited against the drawings of those salesmen receiving drawing accounts. If they do not receive drawing accounts, these commissions should be paid when the account has been collected in full.

c. DETERMINATION OF PRICES ON DIFFERENT JOBS

The determination of the selling prices should always be concentrated in one, or perhaps two persons, qualified to determine those prices. Usually, the sales manager in conjunction with the accounting department will determine the prices on each new order, unless there is the question of a stock proposition which carries with it a standard price, or, a standard job which carries with it standard costs.

All prices should be confirmed in writing to the customer with a duplicate copy thereof going to the salesman.

d. GENERAL SALES POLICIES

The determination of general sales policies should be centralized in the sales manager. These policies, with which every salesman for the company should be familiar, may include the following subjects:

1. Terms of the sales.
2. F.O.B. points of delivery.
3. Time required for deliveries.
4. Sketch requirements and time involved.
5. Acceptance of written orders only.
6. Acknowledgment of all orders.
7. Employment of salesmen and their training.

e. SALESMEN'S TERRITORIES

The question of salesmen's territories is one which must be handled by the sales manager in a definite way. The territories which each salesman must cover should be clearly outlined. In this outline, should be included the accounts which the house has and the prospective customers in that territory. At times, it may seem advisable to allocate certain territories to certain salesmen on account of the similarity of the personal attributes of that salesman with that of the inhabitants of that particular location.

f. REPORTS AND DATA REQUIRED FROM THE SALESMEN

All salesmen should be required to send a daily report to the main office outlining therein the following information:

1. Name of the concern upon which the call was made.
2. Address of the concern.
3. Name of the buyer.
4. Outcome of the interview.
5. Any pertinent facts obtained in the interview which may have an effect upon the future sales to that company. These facts may include the form of lithographic product used, the quantity used, the prices paid to competitors, and if contracted for any period of time.
6. Personal opinion of the salesman regarding the interview and the possibility of future business.

(Continued on page 66)



**IT'S the
highest Quality
OPEN FLAME
CAMERA LAMP
in the
low priced field!**

We mean exactly that! We built it that way—to serve YOU—in the most efficient manner at the most economical cost—besides, the initial purchase price is low.

Only Heli-O-Lites have a balanced mechanism and this new 35-ampere Heli-O-Lite is no exception. That is why it operates so smoothly with a strong, steady, long burning arc—with only slight fluctuation in candle power efficiency—without breaking of the arc over long periods of burning.

The "35" carries on the reputation of higher amperage Heli-O-Lite performance, proudly. You really should learn how this lamp out-performs all other camera lamps rated at 35 amperes or less, and even some higher amperage lamps. You will enjoy reading over the complete facts. Ask us for them and for prices. There is no obligation whatsoever.

*Write Today For Special
35 Ampere
Heli-O-Lite Brochure*

**THE C. F. PEASE COMPANY
846 NORTH FRANKLIN STREET
CHICAGO, ILLINOIS**

SEPTEMBER, 1936



(Continued from page 64)

Production Department

The purpose of this department is to control and plan the production of the product.

The control of this department may be vested in a production manager, who, together with his assistants, will lay out the work in the house to produce it in the most economical way.

At times, different jobs may be run in combination form because the colors and the paper involved are of the same type. On other occasions, every job may require a special press form.

To determine the exact method of producing the contract by the production department, requires a detailed statement of the possibilities of the plant. Some of the factors which enter into this are:

1. The size of the presses in the plant.
2. The number of the press and the type of presses.
3. The number of impressions which can be secured per hour, or in the ordinary working day.
4. The time required for making the press plates.
5. The method to be used in making the press plates, whether hand transfer or photographic work.
6. The time required to secure the engravings.

These are some of the factors to be considered by the production manager in determining his schedule.

The production manager with the aid of the accounting department should devise means of reducing the cost of production and at the same time expedite the processes of production.

Another requirement of the production department is to keep a record of all the orders in the house and be in a position to determine delivery dates on these orders, if requested to do so.

This may be done with the aid of duplicate job tickets, or small cards typed for each order. As the job progresses from department to department, these cards or job tickets may be marked to indicate the progress of the order through the plant. In that way, one may ascertain where any job is at any particular time and at the same time be able to foretell the probable delivery date. These cards or tickets should be marked daily.

General and Administrative Department

This department has as its sole purpose the determination of general and progressive policies for the advancement and perpetuation of the organization as a whole. Its duties consist of the following:

1. Methods of financing the organization.
2. Discussing the advisability of purchasing new equipment.
3. Determining the advisability of purchasing or leasing additional space.
4. Determining the acquisition of branch offices, or branch plants.
5. Dividend distribution policies.
6. Bonus or insurance plans for its employees.

In this department would come the matter of employment and employment records. Every employee should have a card on which the following pertinent information should be contained:

1. Name of employee.
2. Address of employee.
3. Telephone number of employee.
4. Age of employee.
5. Education of employee.
6. Technical education of employee.
7. The date on which the employee started.
8. The date on which the employee left your employ.
9. Record of previous employers and salaries obtained.
10. Reasons for leaving previous employers.
11. Salary received in your organization to start.
12. Department in which employee was placed.
13. Recommendations of employee.
14. Personal references.
15. Employee's advancement in the company.

In the case of new applicants for positions, it might be well to merely take the following information:

1. Name of applicant.
2. Address of applicant.
3. Telephone number of applicant, or place where applicant may be reached.
4. Previous experience.
5. Salary previously received.
6. Type of position applied for.

Then, if an opening does arise, the applicant may be called and more detailed information may be received.

This department should keep a record of all the employees so that all advancements and promotions may be made upon the merits of the individual employee.

Also, safety campaigns and production campaigns should be initiated. Bonus plans or insurance plans backed by the management would aid in fostering the goodwill of the employees and might also aid in increasing the speed of production.

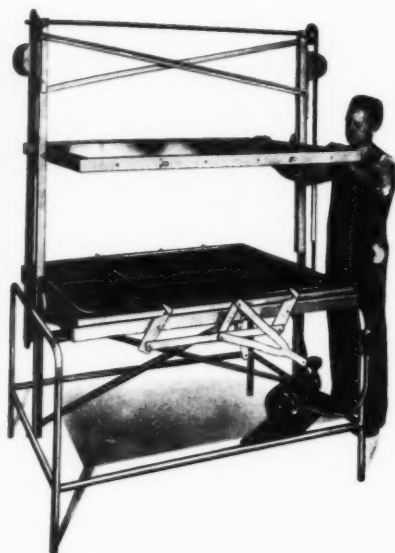
The foregoing description of the routine of an office in an establishment may, as previously expressed, not be applicable to every company in the lithographic field. However, I believe that the general features contained herein should be adopted to some degree in every organization. If, for any reason, they cannot be adopted, the company should strive to attain some of these routines since they will undoubtedly aid materially in the progress of that company, both as to its financial position and insofar as the increase in the volume of its business is concerned.

For Quick - Economical - Sure Results

Use a classified ad in

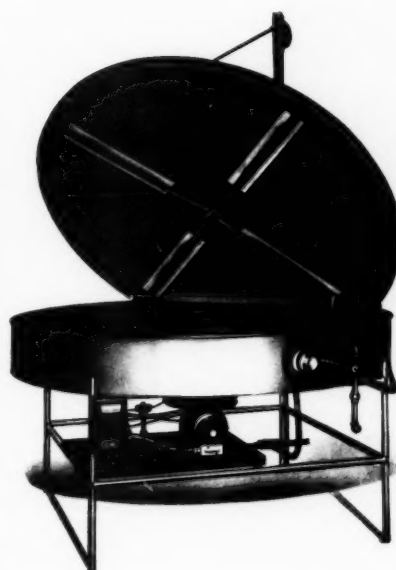
THE PHOTO-LITHOGRAPHER

Lithographic Equipment



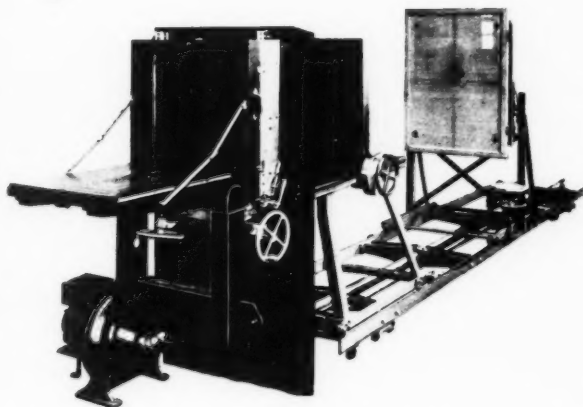
**Robertson
Vacuum
Frame
Type U**

Facilitates time of operator in positioning the work. Full details in descriptive catalogue.



**Robertson
Plate
Whirler**

Gives plates uniform coating; can be run at any desired speed. Practical in its construction.

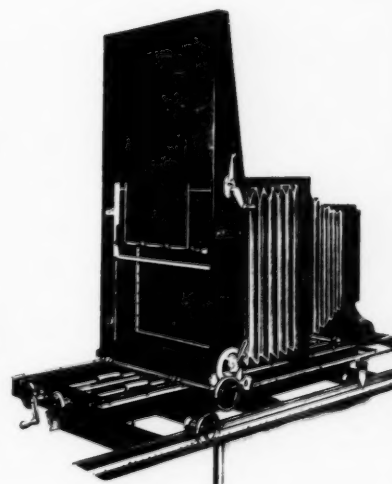


**Robertson Fully Equipped Camera
With Vacuum Film Holder**

This type camera is built for accuracy and can handle exceedingly large copy. The vacuum film holder is quite a convenience.

**Robertson
Camera
with Screen
Raising
Device**

When necessary, screen can be raised out of the way without taking plate holder off the camera. All size screens up to full size of camera can be raised by this device.



Write or wire for our completely illustrated catalogue of Robertson Equipment for the lithographic process.

R. R. ROBERTSON
Manufacturer and Distributor **400 W. MADISON STREET**
of QUALITY EQUIPMENT **CHICAGO ILLINOIS**

Fundamentals of Advertising

The second of a series of articles containing boiled-down information which photo-lithographers and their salesmen should know

By WILLIAM WOLFSON

II. Copy and Copywriting

AN original and pleasing presentation consists of two important factors: the message or copy; the artistic arrangement of the copy, including art work.

Copy has long been classified as

1. Reminder copy.
2. Reason-why copy.
3. Institutional copy.
4. Human-interest copy.

Reminder Copy. Newspapers, magazines, radio broadcasts, car cards, posters, etc., frequently carry advertisements of goods intended for general consumption by the masses, and are intended to remind. Copy of this kind is based upon the assumption that the market has already been captured, and all there is left to do is to remind to buy.

Reason-Why Copy. Advertisements of this kind are distinguished by the proffering of reasons why the product or service should be considered and bought.

Institutional Copy. This is so written as to build prestige and good will. Banks and other institutions often use this type of copy. Companies who manufacture a family of products find it advantageous; for when considered the leaders in the field, and when respected by the public, people will buy in preference to competitive brands offered.

Human-Interest Copy. Human-interest copy is aimed at the emotions whereas reason-why copy appeals to the intellect.

Pick up any publication and see if you are able to classify the advertisements carried. You will observe that there are no rigid boundaries. An institutional advertisement submits reasons why, injects some emotional appeal. After all, every advertisement save the first endeavor of a new advertiser is a reminder of sorts.

Many years ago what was then a new school of advertising copywriting came to the fore. There was too much of what was termed the "we" attitude in advertising was the cry. "Don't harp upon OUR grand factory, OUR wonderful merchandise," advised the advocates of the new idea: "write from the YOU attitude."

This led to a further development. "Don't attempt to sell the goods so much as to elaborate upon the benefits the purchaser will derive—in profit, in health, in education, in enjoyment and in satisfaction."

At one time, sex and position in life, while not altogether neglected, were not seriously considered. Later

came the era of the feminine slant—advertising copy directed at women, the purchasing agents of the family. Again, there appeared the doctrine of a different approach; and you wrote differently for doctors than you did for the eyes of a small-town grocer.

Such narrowing down found its application to all copy. "Old Man Specific" was the remedy. Were you a restaurateur, you should not advertise merely a splendid, full-course meal for two dollars. You must glowingly describe each delicious dish in detail. Such expressions as "the finest ingredients" were out; you must say what they are. "Be specific" instead of general.

Although display, or the artistic arrangement of a copy (the layout), enters into the attracting of attention, the work which copy must do has been formulated as follows:

- Copy must attract attention;
- Copy must create interest;
- Copy must arouse desire;
- Copy must convince;
- Copy must stimulate to action.

Practically all of the angles of copywriting, as given in the standard text-books, as taught in classes, have been put before you. However, a number of university graduates have been referred to me for assistance in getting started in advertising. The question the majority of them ask me is this: "Now that I have completed my studies, reviewed my notes and my books, I simply cannot write copy as I should. What can I do about it?"

They have missed something essential. And they are right.

Every single thing in the universe (which is covering quite a bit of territory), whether animate or inanimate, whether the whole or a part thereof, expresses itself according to the laws of its being.

An organization expresses itself through its products or its services; through its advertising and selling activities. Alert executives know this. But self-expression cannot be carried too far, especially in selling or in advertising. It must be sublimated.

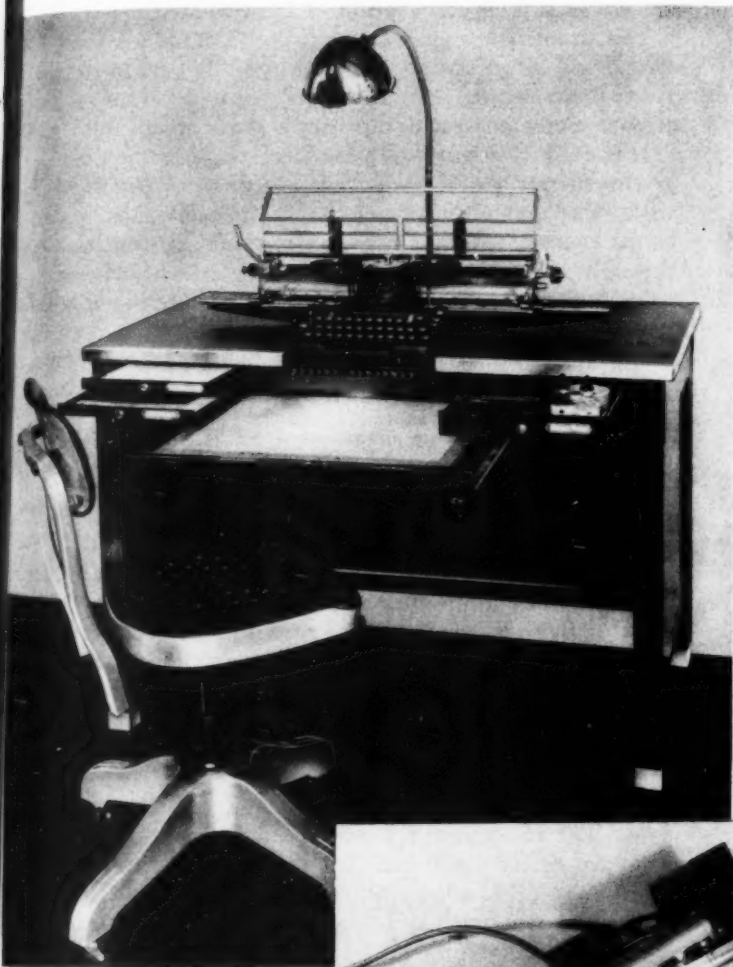
When you write copy you, as a copywriter, follow the same natural law of self-expression. This is what retards you.

When you speak, you express YOURSELF. When you write, you express YOURSELF. Whatever you do, you express something of YOURSELF. This is inevitable.

But the people you reach through your advertising

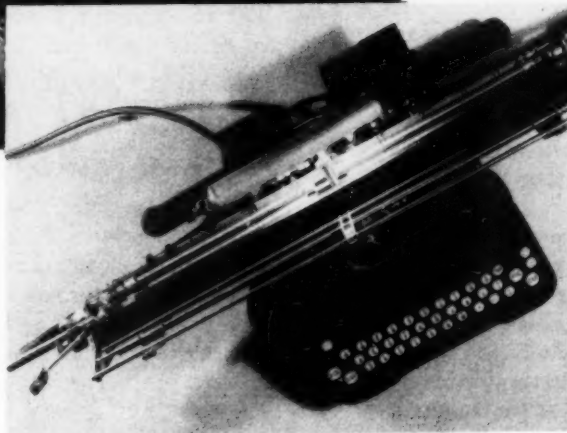
Announcing

The new **VARI-TYPER** Composing Unit



RALPH C. COXHEAD CORPORATION presents the new VARI-TYPER COMPOSING UNIT - a contribution to the business world which is destined to go far in changing old habits and introducing new economies. Here is a unit which ingeniously contains built-in devices for composing reading matter for Photo-offset, Stencil duplicating and Gelatin printing machines.

The machine itself is the latest Vari-Typer model with the new long carriage taking a 19" sheet. It has the new carbon ribbon attachment for producing perfect line copy for photo-reproduction. It has three horizontal spacings. The underslung type drawers contain 12 Krometal type faces. The desk is of specially constructed metal with drawers designed for special use in connection with the operation of the machine. These drawers contain every conceivable aid from a T-square to a roll of scotch tape. A combination mimeoscope and drawing board ingeniously disappears inside the desk when not in use. The multiple lighting system not only illuminates the frosted glass in the drawing board, but also supplies light to the flexible lamp and power to the machine.



RIGHT-The rear lighting arrangement for stencil and alignment work. An invaluable aid for quick, easy operation. Note the special large spools for carbon-paper ribbon.

...

RALPH C. COXHEAD CORP.
17 Park Place, New York City

Write Today

SEPTEMBER, 1936

copy are not interested in you except under rare circumstances. Your relatives, friends or acquaintances may be—they are not. They resent your self-expression because it intrudes upon their own self-expression. They turn away from it. They will not read such copy.

Here you see the reason for the "you" attitude.

Yet you must express something, otherwise there cannot be any impression made. What success you will attain as a writer of advertising copy hinges upon the cultivation of your dexterity in writing, and the ability to completely divorce yourself from self-expression when you write.

Facility in copy will be treated in the next article. What must now be undertaken is the elimination of all traces of your self-expression.

Many a productive and prolific writer of advertisements—despite his experience, his knowledge and his skill in application—frequently sits down to labor, often in actual agony, only to produce results far from satisfactory. He struggles with self-expression, but does not realize it.

How ridiculous, as a little thinking shows, for writers to strive to compose effective advertisements when they, themselves, are not in a frame of mind conducive to effective feeling; to write courteously when in a huff. But what a nasty epistle an angry man can indite! Why? Because he goes along the line of least resistance. He is expressing his mood or state of mind!

The states of mind influence the act of writing. Working against a contrary state of mind, or writing without an understanding of self-expression and these mental principles, is inimical to the result.

It follows logically that the achievement (in writing) is greater when the state of mind and the endeavor are as one.

Fortunate is it that states of mind are not lasting. Experiment and observation show that we are influenced by external and internal conditions, and that it is perfectly natural for us to be in one state of mind and then in another.

States of mind are either beneficial or injurious—with many degrees of differences between. And it is well worth the time and energy in the exercising of the mental faculties that will allow us to don first one state of mind and then another, even as we put on a dress suit for one occasion, a business suit for another, a sporting outfit for still a third.

How is this done? Through intelligent practise. Just as an actor studies and practises for his character roles. Suppose we receive a commission to write a series of advertisements, say, from a manufacturer of women's furs, just established. The policy of this new house is to make furs of the finest quality. Our task is to convince and to sell all fur buyers connected with specialty shops and good department stores throughout the country.

We are duly impressed. The specimens of the finished articles made by our client pleases us. We resolve to let every word we write be impregnated with the idea of quality. We sit down in a definite state of mind and write; and to administer to our vanity, let us take it for granted that the series is a great success.

Nothing wastes as much time and is responsible for innumerable hours of hard, unnecessary work and infertility as the lack of a dominant state of mind. Omitted from the writer's consideration, it causes the negligent writer many needless efforts. But by its employment he can save himself from failure, save the vain efforts that must be gone through until he blindly stumbles upon, and as blindly uses, the principle in the event of success. And when occasionally he accidentally finds it at the beginning of his efforts, and unconsciously, and the copy seems to write itself, he attributes the unwonted skill to inspiration.

The dominant mood in writing, then, is a casual or temporary state of mind, deliberately assumed and given control of a certain sitting. This dominant mood may at times possess two or more qualities.

It is evoked in various ways. Referring to the example of the furrier given above, where quality prevailed, a study and examination of the merchandise fixed this. In all events, whether through physical examination or through investigation, discussion, meditation, enthusiasm, etc., it is the importance of the dominant mood to be assumed that is first realized. Then it is fixed by resolute determination just before the sitting.

Effective Selling

"A wonderful salesman called on me this morning. He asked for only a minute or two and took no more.

"But in that brief talk he gave me his facts, figures, reasons—clearly thought out, logical, well phrased, brief but pointed. And I got every point.

"But I got more. There was something in his air, his dress that suggested the quality of his product. He got my confidence from the start—and kept it!

"His last sentence had the right ring: 'You're busy,' he said. 'Let me know if I may go more into detail when you are ready—and the full story of our product and what it will do for you will be presented.'


"When we finished I found in my hand a complete memo of everything he had said (for my further consideration when I could give it time); and a return card to use."

COMING . . . NEXT MONTH

The full text of all addresses delivered at the National Association of Photo-Lithographers' Convention in Atlantic City. Important technical, management and sales promotion subjects.

VULCAN

OFFSET BLANKETS and LITHOLASTIC INKING ROLLERS



are made under constant laboratory control. This includes supervision of raw materials, manufacturing operations, and the finished product. As a result, Vulcan products for Lithographers are uniform in quality, dependable, and economical. A large majority of all the Lithographers in America are using Vulcan products and will substantiate the claims made for them. • Why don't you investigate Vulcan offset blankets and Litholastic inking rollers? Printed matter and names of users in your vicinity will be sent to you on request. Write to us now —while you have it in mind.

VULCAN PROOFING COMPANY

FIRST AVENUE AND 58th STREET, BROOKLYN, NEW YORK.
608 SOUTH DEARBORN STREET, CHICAGO
Pacific Coast: RALPH LEBER CO., INC., 426 Polson Bldg., Seattle
Southern Representative: HI-SPEED ROLLER COMPANY, New Orleans

HAMMERMILL OFFSET

SURFACED SIZED

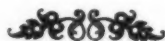
A DEPENDABLE offset paper possessing a beautiful, even texture, and a brilliant white color.

Its surface is closed, non-absorbent and free from fuzz or lint, insuring a clear sharp impression. A new development in finishing makes the paper alike on both sides, in printing qualities and appearance.



STOCKED IN ALL THE REGULAR
SIZES AND WEIGHTS

SIZES	ACTUAL WEIGHTS PER 500 SHEETS				
25 x 38	60 ..	70 ..	80 ..	100 ..	120
28 x 42	74 ..	87 ..	99 ..	124 ..	149
32 x 44	89 ..	104 ..	119 ..	148 ..	178
35 x 45	99 ..	116 ..	133 ..	166 ..	199
38 x 50	120 ..	140 ..	160 ..	200 ..	240
44 x 64	.. 208 ..	238



Please Phone Our Service
Department

CAnal 6-3600
EXTENSION 39

For Sample Book or Sheets
For Trial Purposes

Distributed by

Miller & Wright Paper Co.

200 VARICK STREET

NEW YORK, N. Y.

From a BROADSIDE



HAMMERMILL OFFSET

for Sharp, clean Printing

When you need a paper that has character and that can "take it" — whether it is for a large broadside, a self-mailing folder, or a small envelope enclosure—specify Hammermill Offset.

Here is a sheet that has the strength to withstand rough treatment in the mail and repeated handling and folding. The seven special finishes give a third dimensional effect that is refreshing in illustrations . . . and these finishes are alike on both sides, which makes economies possible by printing "work-and-turn."

Your printer or lithographer knows Hammermill Offset for its splendid printing qualities. It lies flat without any troublesome tendency to curling, wavy edges, wrinkling or stretching on accurate register jobs.

Although low in price, Hammermill Offset is thoroughly dependable, so we repeat "Whether it is a broadside or an envelope enclosure, use Hammermill Offset."

Send the coupon for the Hammermill Offset Sample Book, and see for yourself its fine texture, crisp liveliness, brilliant blue-white color, and its outstanding printing qualities.

HAMMERMILL PAPER CO.

S-PL

Erie, Pa.

Please send me the Hammermill Offset Sample Book.

Name

Address

(Attach to your business letterhead, please.)



MAIL
COUPON
TODAY



Lithographic Exhibits Featured at Eastern States Exposition

THE Brooks Bank Note Company, Springfield, Mass., manufacturer of lithographed advertising and packaging materials and lithographed business stationery, is sponsoring a very extensive and unique manufacturing exhibit of lithography at the Eastern States Exposition held at West Springfield, Mass., the third week in September.

The exhibit will primarily advertise the advantages and efficiency of modern offset lithography as well as equipment and materials used in its manufacture to the 300,000 or more people who will attend the Eastern States Exposition.

Educational in nature, this display is more of a sales promotion for modern offset lithography itself, than an advertisement for the Brooks Bank Note Company or the other cooperating companies.

A modern lithographic manufacturing plant will be set up and operated actually manufacturing color advertising material and business stationery on order for customers of the Brooks Bank Note Company. The equipment installed and operating will start with preparations of originals—camera work and raw stock—and carry the manufacturing operations through to completion even to the packing in corrugated cases and the shipping by a motor truck transportation company.

It is the thought of the Brooks Bank Note Company, in sponsoring this exhibit of lithographic manufacturing as applied to the highest quality work in color advertising—labels, folding boxes and business stationery—that public recognition of the quality and efficiency of lithography for these products will promote greater use of offset lithography and that all the companies cooperating will benefit indirectly.

While the exhibit will be made up of what is an actual lithographic plant in operation, it will bring in educational display on the materials used in the lithographic industry from paper and films to corrugated shipping cases.

The cooperating companies will each supply their particular product for use in this model lithographic plant and will provide supplementary educational material on their particular product.

The Rutherford Machinery Co. (division of General Printing Ink Corp.) will supply the new photo lettering machine that mechanically designs and produces display and copy lettering for advertising material—labels, folding boxes or stationery. Their Rutherford Offset press will produce the entire output of this miniature plant at the rate of 5,000 full press sheets per hour or better. It is expected that during the week of the show nearly one-half million full press sheet impressions will be turned out on this press.

Fine papers will be converted into finished stationery and advertising material throughout the week of the

exhibit. A guillotine cutter of the latest type will transform the lithographed sheets into their finished size ready for wrapping and packing directly at the end of the production line into the waiting corrugated shipping cases. The exhibit will demonstrate the line production efficiency through packing directly at the end of the machines gained only through the use of corrugated shipping cases. A trucking company will have an office at the end of this exhibitionary manufacturing plant to receive the output and transport it from the Industrial Arts Building of the Eastern States Exposition to the customers of the Brooks Bank Note Company.

Other companies will cooperate through supplying materials and exhibition materials on films, photographic materials, lithographic inks, wrapping materials, electrical equipment, etc.

The space for the exhibit in the 3½-acre Industrial Arts Building of the Eastern States Exposition has been so arranged that the dark rooms—storage space, etc., can be planned in the center of the exhibit with line production being set up around the outside on through aisles. Every detail of every operation (except those performed in the dark room) will therefore be clearly visible from the aisles adjoining the exhibit.

The Brooks Bank Note Company experimented with a manufacturing exhibit of this nature a year ago when with the cooperation of the International Paper Box Machinery Co. of Nashua, New Hampshire, they set up and operated machinery which produced over three million lithographed folding paper boxes in direct view of the public attending the Eastern States Exposition last year. The display was so successful and created such interest among those attending the Exposition that it was decided to organize an even better display this year to put lithography before the public.

Numbers of buyers of color advertising, packaging and stationery have indicated their intention of attending the Eastern States Exposition this year to see first hand the details of modern lithographic manufacturing. At the same time printers, lithographers, and photo engravers are planning to take advantage of this opportunity to investigate the possibilities of this equipment and the materials used. The Brooks Bank Note Company have indicated that they would welcome the attendance of and discussion with others in the industry at this exhibit—for the benefit of progress in the industry as a whole.

The Eastern States Exposition, at which the exhibit is being held, is an annual industrial and agricultural exposition held on its 175-acre grounds in West Springfield, Massachusetts, the third week in September of each year. Its permanent brick and steel exhibition buildings and grounds represent an investment of over three millions of dollars. All of the eastern states sponsor state exhibits of regional manufacturing, recreational and agricultural ad-

The best things in life, *Maria*,
don't cost the most

AND BY JIMINETY, THAT
GOES FOR COFFEE, TOO!

MAXWELL HOUSE COFFEE

GOOD TO THE LAST DROP

This is the Life!

FISHIN'.. AND GOOD COFFEE!

MAXWELL HOUSE COFFEE

GOOD TO THE LAST DROP

**MAXWELL HOUSE
COFFEE**

JUST TRY IT

iced!

"Nothing so refreshing and delicious,"
say Maria and Lanny Ross, radio stars
of Captain Henry's Show Boat

GOOD TO THE LAST DROP



COATED BLANKS

are "Good" to
the Lithographer

For Car Cards and various types of displays, many of the largest Offset Lithographers have standardized on FALPACO, because they find that the finished results on clay coated blanks satisfy their cardboard requirements, especially where several colors are used.

There is no substitute for the super-smoothness and extra lustre of the Falpaco Coated Surface. Follow the example of the leaders and continue to use "the recognized standard for street car and display advertising."

Ask your paper merchant or write direct to the mill for sample sheets.

FALULAH PAPER COMPANY

FITCHBURG, MASS.

New York Office: 500 Fifth Avenue

• MAXWELL HOUSE COFFEE CAR CARDS

We illustrate here an end card and two regular size car cards produced and used as a series for Maxwell House Coffee. They are beautifully lithographed in seven and nine colors and are excellent examples of the superior printability of the Falpaco Coated surface.

vantages. Four of the New England states have their own \$60,000 state exhibition buildings on the ground. The entertainment program adds zest to this great educational show, including one of the finest horse shows in America—auto and horse racing, band concerts, parades, fireworks, and a hundred and one other entertainments in addition to the basically educational display.

The unusual lithographic exhibit sponsored by the Brooks Bank Note Co. and the cooperating companies offers an unusual opportunity to the advertising and packaging executive, the buyer of lithographic materials or the printer and lithographer to combine business with pleasure.

Why the N. A. P. L.?

(Continued from page 32)

The first meetings evidenced a bitterness and distrust so deep that some left the meeting with the feeling that the thought of ever getting together on a friendly and sane basis was hopeless.

At this point, a group of photo-lithographers who were willing to risk their time for the good of the industry and who realized the advantage of operating under some Code of Fair Practice, gathered together in Washington and formed the National Association of Photo-Lithographers. By-laws were prepared and approved and an executive board from various parts of the country was elected. At least here was a nucleus about which to build the future of photo-lithography.

It was decided that the best interest of the industry would be served by the formation of local groups who could set up and control to some extent their own local trade practices.

Local photo-lithographic groups were set up in Washington, Philadelphia and New York. Meetings were held to discuss local matters and these have continued down to the present time.

The New York group organized with sixteen members and affiliated as a body with the National Association. Meetings were started to settle local matters and have been held at frequent intervals ever since.

However, some few photo-lithographers have not joined the Association. They have not given their employees the benefit intended for them under the N.R.A. The National Association of Photo-Lithographers, as we understand it, exists for the benefit of both employer and employee. Both suffered long enough from unfair competition. Photo-Lithographers who will not co-operate in clearing up unfair competition are either very short-sighted or extremely greedy.

Increases in prices in every field are imperative. Of course any increase in price must be based on the increased cost of materials, labor, shorter hours and other pertinent cost factors. The fact that paper has jumped several times in price, that labor is receiving a higher wage, that a forty hour working week increases costs,

these facts at once give the buyer sufficient reasons for a price increase.

And let us not think that an increase in price will settle the matter. From the many taxes and social legislation now on the books which becomes effective in the future, it will be important that prices be increased again year after year.

The National Association of Photo-Lithographers has gotten together a great deal of information which is available under extremely low membership fees. It has designed a cost system for the industry. It has set up some educational material. It has developed at considerable cost and much hard work its own lithographic publication. Cost information on equipment used in the industry and production standards for this equipment are available. It has appeared in Washington in opposition to legislation prejudicial to the industry. It has secured recognition by the post office of publications turned out in a Retyping Department for second-class entry. A vast amount of material is available as a result of three years of hard work carried on under an amazingly low budget.

We might ask ourselves the question, "Is the job completed." To be sure, it is not. However, the nucleus who gathered to take hold of this task have made good progress in setting up the machinery. The first task is to put selling on a basis where both employer and employee will be receiving a fair return for their services. However, this is still far from being accomplished. The next task is to take hold of the far more important job of increasing the sales of photo-lithography to a point where those in the industry can be assured of not only a reasonable volume but also a fair profit.

Process Needs Advertising

Photo-lithography, because of the warfare heretofore described, has not been properly advertised. Some buyers believe it to be just another reproduction method of producing copies at so much per hundred. They do not know of the beautiful color work, the voluminous tariffs, the insurance work, the map work and many other kinds of work which can be produced by photo-lithography. The fact that it is unnecessary to set type, that material can be typed and then photographed for transfer to a plate, that material can be thrown up or reduced in size by a camera, that halftones can be produced that compare more than favorably with those of the photo-engraver, and that all of this work can be produced in a very short time—few of these facts have received adequate advertising or publicity.

The proposition of bringing the photo-lithographic industry to this point had consumed much time and the patience of many leaders in the industry. In fact, a number of individuals gave weeks of their time to bring order out of chaos. Much credit is due to those who performed this important work. Now that a start had been made and the possible benefits of organization became apparent, more cooperation through one central office became necessary. A full time executive secretary was employed to take hold of the task of carrying on in this

NEW SAVING Planography!

TYPE YOUR COPY ON THE NEW ROYAL CARBON RIBBON TYPEWRITER

TYPEWRITE instead of type-set! Eliminate expensive type-composition! Save the difference in cost... Get a better job!

And that is why so many organizations use this New Special Model Royal in preparing copy for commercial offset (planography)

SURE RESULTS!

In operation, this New Carbon Ribbon Royal is identical with the standard office

Royal. Unique features of control, however, are provided for specialized offset work - guaranteeing sharp clear-cut type-face reproduction and uniform density throughout - perfect copy for the camera!

In a single afternoon, a girl at this New Royal can easily prepare material for a whole campaign; thus cost is kept at a minimum.

NEW DISTINCTION!

More than 50 type-faces are available. All have personality plus the warmth which only typing can give.

ROYAL TYPEWRITER CO., INC.,
2 PARK AVE., NEW YORK CITY.
Branches and Agencies
The World Over



SPECIAL CARBON RIBBON ROYAL... ALL THE EXCLUSIVE IMPROVEMENTS OF THE FAMOUS EASY-WRITING ROYAL - WORLD'S No. 1 TYPEWRITER. PLUS MANY SPECIAL OFFSET REPRODUCTION FEATURES. IT IS AVAILABLE IN ANY CARRIAGE WIDTH, OR TYPE-FACE ON SPECIAL ORDER.

work of rehabilitation. This secretary was charged with the responsibility of securing adherence to an agreement of the members of the industry to sell at prices in no case lower than those established as average costs.

Headquarters were opened and complaints of every kind received. Some lithographers had chiselled so long, that even though there was now a cost schedule established, these photo-lithographers would search between the lines to discover ways and means of overcoming the restrictions set up. Substitution of stock, so that the schedule would not apply, combining orders to defeat the schedule, and side arrangements with purchasing agents were some of the devices utilized by the "hungry" photo-lithographers to secure orders.

The executive secretary was given full power to proceed as he saw fit, to discover and publicize those who did not play ball under the new scheme of things. Trade Practices were added to the schedule. The secretary was given the power to receive, investigate, and whenever possible, settle all complaints referred to the Association. He was given the right, under courtesy from the membership, to inspect all data, books or other records relating to a complaint. He was given the right to call together all parties to a complaint to expedite the settlement of differences arising between photo-lithographers. It was suggested that the secretary refrain from calling on prospects or customers in investigating complaints; but when in his judgment it is necessary to call on a prospect or customer to obtain a true picture of conditions, he should have that right. He was given the right to render decisions in all questions not covered by written record.

Complaints at first poured in on the secretary. Some of them were without foundation, others were serious, and it did seem that we were going to have a problem on our hands as to whether or not the chiselling was actually to stop.

Chiselling Made Unpopular

Impressed with the fact that only by radical measures could these chiselling complaints be cut down, the secretary adopted drastic and unusual methods of investigating complaints sent him. A history of one of the earlier complaints will serve to point out how chiselling in one Metropolitan Area was made unpopular. This complaint developed a situation to immediately test the proposition of whether the Association could effectively deal with chiselling, unfair practice, and other difficulties evident in the industry.

Several photo-lithographers had quoted on a volume of business; a number of firms were hungry for it. The buyer, of course, anxious to buy to best advantage, determined to drive as hard a bargain as possible. A photo-lithographer complained to headquarters that one of his competitors was selling photo-lithography at prices below cost. He was insistent on an immediate and thorough report. Imagine his consternation, if you will, when he was told that he must cut his price below costs to get this, and that his competitor, who had agreed to sell at prices not lower than minimum costs, had submitted a lower price.

The secretary secured an appointment over the phone giving the story to the competitor who was under question. The competitor said, "Yes, come and see me. We will be glad to show you all of our records." The next morning was spent in seeing the records and in taking off pertinent information. It was found that the member complained against had a contract with the customer at prices not less than the agreed minimum cost, but that his charge for rush service was less than that agreed to by the membership. The contract had been entered into before the adoption of any minimum cost schedule. The member explained, therefore, that he did not know what rush service charges would be established by the Association at the time he quoted his prospect.

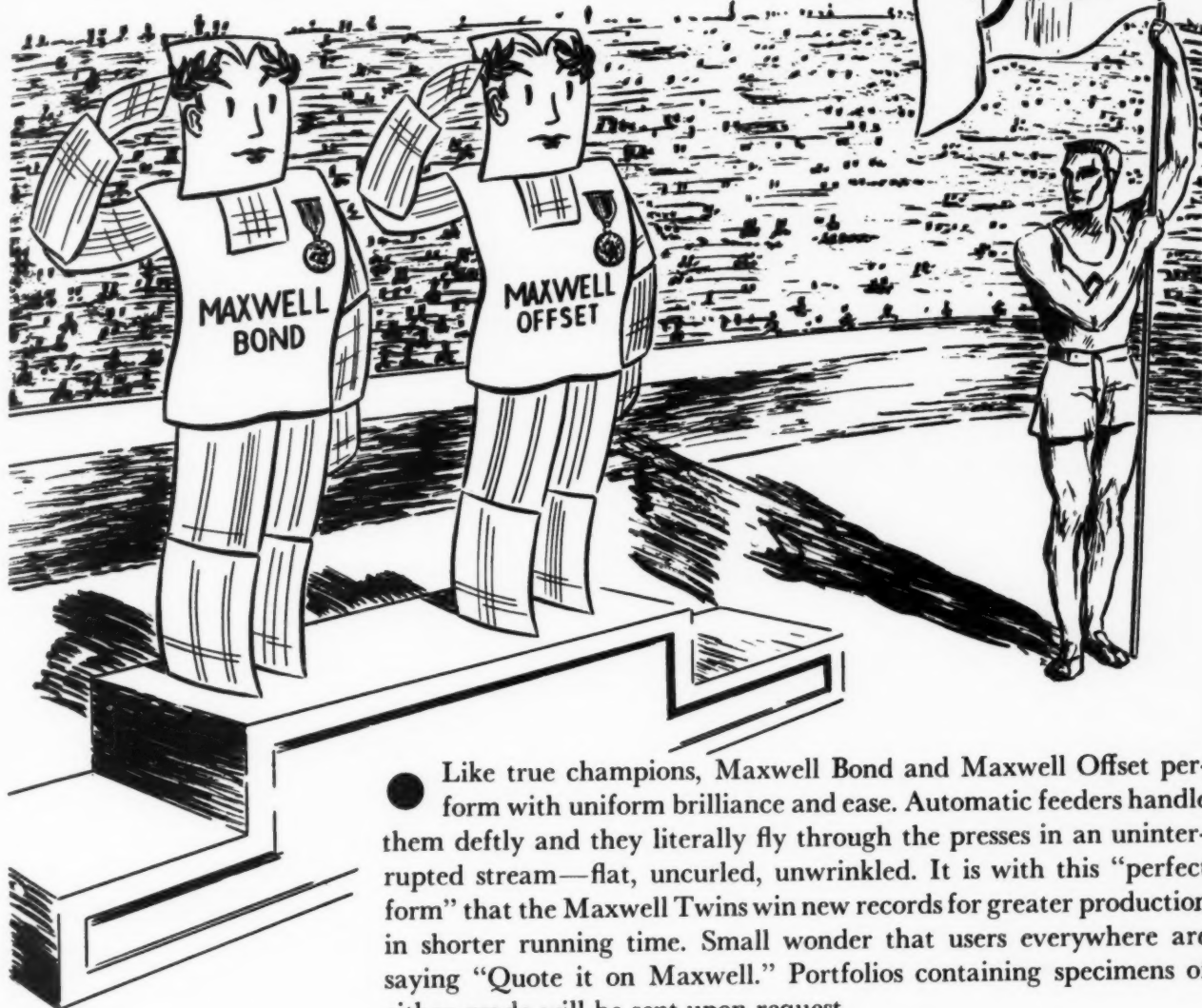
Situation Is Cleared Up

The secretary reported these facts to the complaining firm. But, because of many complications in the situation, the competitor asking for facts in this case required further evidence that his competitor was not chiselling or obtaining business on an unfair basis. Here was a test indeed. The secretary phoned the member complained against again, telling him that the complaining member was not yet satisfied. The secretary asked for a conference in the office of the member complained against. Such a conference was to be attended by all of the competitors interested in this particular account.

Consider, if you will, a few of your competitors coming to your office to look over your records. Obviously, when the group gathered for the conference, feelings were at a high pitch. However, the conference had not proceeded far before all of the records were thrown wide open for everyone to see. The member asking that the matter be investigated was entirely convinced that his competitor had quoted prices not lower than those established as cost. He was shown a contract, orders, and other working material relating to the complaint. He accepted as explanation for the low percentage quoted for rush service the statement of his competitor that "these percentages for service were established before the Association had agreed to a uniform premium on rush service." After a free discussion with everyone laying his cards on the table and getting out of his mind all suspicion and doubt, this complicated situation was amicably settled. What might have grown to a long drawn out and bitter struggle between photo-lithographers, with the customer getting all of the advantage, was agreeably cleared up. The conference closed with good feeling evident on every side, and it was agreed that it had been a good thing to get right down in the dirt to discuss the first trying situation.

If all of the firms in any one area owning and operating even a single small press will put their shoulder to the wheel, we are sure we can increase sales at prices which will show a profit. We do hope that many will give us the benefit of their thought and experience in formulating our plans and policies. We believe that this story of what has been done and what we hope to do will induce many firms to join with us in this constructive industry work.

CROWNED CHAMPIONS



● Like true champions, Maxwell Bond and Maxwell Offset perform with uniform brilliance and ease. Automatic feeders handle them deftly and they literally fly through the presses in an uninterrupted stream—flat, uncurled, unwrinkled. It is with this “perfect form” that the Maxwell Twins win new records for greater production in shorter running time. Small wonder that users everywhere are saying “Quote it on Maxwell.” Portfolios containing specimens of either grade will be sent upon request.



THE MAXWELL PAPER CO.
FRANKLIN, OHIO

MAXWELL BOND

WATERMARKED

MAXWELL OFFSET

TUB-SIZED

MAXWELL IS MADE WELL

Every firm owning and operating even a multilith press should put its shoulder to the wheel and help us to increase sales at prices which will show a profit. Many firms should give us the benefit of their thought and experience in formulating our plans and policies. We believe this résumé and what has been done, and what we hope to do will induce many firms to join with us in our constructive industry work. The hopes and aspirations of the National Association of Photo-Lithographers depends largely on the way we continue in the work we have begun. Business is good and we can secure our share of it in proportion to the effort we put forth. We believe that your business and the business of every photo-lithographer and those who sell this industry will show a wide advance at fair prices if we can secure the help of those who are interested in this industry. Will you help us to go on with what we have started?

Full Lithographic Technique Covered in Manual

All phases of drawing on and printing from lithographic zinc and aluminum plates are covered in the concise manual entitled, "Metal Plate Lithography," by C. A. Seward. The book contains 72 pages, 8¾ x 11¾ inches, including 20 plates.

The text covers graining and preparation of the plates to receive the drawing; making the drawing with crayon or wash; finishing the plate; gumming up; selecting and preparing the plate for printing; preparing the plate and etching it; printing by several methods; protecting the plate after printing; storing the plates; the transfer method; and miscellaneous points concerning manipulation.

This complete, practical manual is listed by the publisher at \$3.50, but is available to readers of THE PHOTO-LITHOGRAPHER for \$2.00. Orders may be sent directly to this publication's offices.

Special Device Helps Lithographer in Testing Plant Work

Applications of the "Fade-Ometer" in lithographic plants are shown in a complete catalog which may be secured from Atlas Electric Devices Company, 361 W. Superior St., Chicago. The device is designed to pre-determine the light fastness of papers and printing inks.

According to one lithographer who is quoted, the device serves "as a guide in the selection of color to meet any desired standard." It is especially recommended for the production of billboard posters.

SPEAK . . .

"Your Customer's Language!"

There is no more certain way of getting close to the buyer of lithography than to evince a definite knowledge of the problems that confront him daily. Indeed, a salesman's ability to "talk the customer's language" is an Open Sesame to sales.

Important buyers of lithography are today following with unequalled interest the

GRAPHIC ARTS BUYER

the new "forum" that helps them analyze their problems, describes new production techniques, suggests helpful hints for better advertising.

Typical features of the current issue:

"How to Choose the Paper for the Job"
"Reproduction Proofs"
"Motion and Light in Display"
"Bleed Plates"

and a dozen other meaty, practical topics.

● Assure yourself of your prospects' attention by subscribing to the only specialized production magazine published.

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PRINTING

The Pioneer . . . Its editorial policy always abreast or leading the parade of advancement in the Graphic Arts, PRINTING 14 years ago produced *The Offset Printer* as a monthly supplement. It averaged 40 pages per issue and was the first—the pioneer—regular monthly trade publication ever produced in the United States by the offset process.

After two years of continuous publication, this offset printed supplement was discontinued and its editorial content placed in PRINTING because of a change in the editorial policy whereby it was determined to publish the news of the entire Graphic Arts under one cover.

Because of its complete coverage of the Graphic Arts from the news, marketing, management, craftsmanship viewpoints, PRINTING is a valuable advertising medium for manufacturers and suppliers who desire to contact the offset lithographic—in fact *all* divisions of the industry.

PRINTING has available for interested parties complete information on markets, circulation, advertising.

Sample copy of PRINTING will be sent free upon request to readers of the Photo-Lithographer.

Subscription price—National Edition \$2.00; New York Metropolitan Edition \$3.00. Includes a copy of "The Paper Catalog", the standard directory of watermarks and brands of paper with their source of supply.

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FORTY-ONE PARK ROW

NEW YORK, N. Y.

SEPTEMBER, 1936

81



A very fine piece of creative work, especially prepared for lithographic reproduction, by a comparative newcomer to the field, Walter Dougherty.

"Most Valuable Publication"

"It affords us much pleasure to renew our subscription to *THE PHOTO-LITHOGRAPHER*. When we say pleasure, we have in mind that to our way of thinking, this is the most valuable publication that has ever entered our institution.

"The writer has been connected with this concern for the past 47 years and for many years we have subscribed to several of the printing magazines as well as others that are interested in either printing, binding or lithography.

"We are very much interested in your answer to the question: 'Should We Install Offset Equipment?' We are the originators so far as this section of the country is concerned in photo-lithography and as you know the expense involved in making this department a profitable one is great. However, we are pleased to state that our work of this kind is of a superior quality, but this costs

money and our firm does not attempt to compete with the cheaper class of work. Unfortunately, so many concerns are equipping themselves for this class of work without any idea as to the expense involved."

MILTON MARKEWITZ
President
Bushong & Co.
Portland, Oregon

Baltimore Branch Opened by Triangle Ink Co.

The opening of a new Baltimore branch, where a full line of lithographic inks will be stocked, has been announced by Triangle Ink and Color Company, Inc., whose factory and general offices are located in Brooklyn, N. Y. The Baltimore address is 219 W. Franklin St.

J. F. Perfect, who is well known to the graphic arts, has been placed in charge of the Baltimore office.

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Offers Booklet on Technique of Planographic Process

Valuable information is contained in a new booklet for offset producers and users just issued by the Royal Typewriter Company, Inc. In this booklet entitled "Cleaner, Sharper Offset Copy" is a thorough, non-technical description of the commercial offset—or "planography"—process with pertinent questions and answers on it, outlining in detail the principles of the process and how it can be used for maximum effectiveness.

Another division of the booklet is devoted to the various types of work to which the process is adapted. Still another section tells how the Royal Special Model Carbon Ribbon Typewriter can be employed in producing perfect original offset copy and samples are shown of the various type faces recommended for offset copy use.

Copies of this informative booklet can be obtained without charge by telephoning the local representative of the Royal Typewriter Company, Inc., or writing Royal at 2 Park Ave., New York, N. Y.

Sigmund Ullmann Co. Expands Cleveland Office

Increased business has necessitated the doubling of space and equipment in the Cleveland office of Sigmund Ullman Company, division of General Printing Ink

Corporation. New location is at 310 Lakeside Ave., Cleveland, Ohio. The office is managed by C. Kloepper.

New Structure Marks Haloid Expansion in Rochester

The Haloid Company has broken ground for an addition to its plant on Haloid St., Rochester, N. Y. The structure is estimated to cost \$75,000.00, which will be met with working capital, no new financing being required. This is the second major plant expansion since 1934, a substantial addition having been completed in 1935.

According to Gilbert E. Mosher, President, the acquisition of the Rectigraph Company in November, 1935, which greatly increased the manufacturing capacity of The Haloid Company, now necessitates enlarged quarters for the executive staff and for the accounting departments of the combined organizations. The new addition will also provide space for a modern research department, equipped to perfect present products and to investigate new product opportunities in the photographic field. A permanent display of the recently improved Rectigraph Photo-Copying Machines will be installed on the second floor and a fire proof vault on the ground floor.

Mr. Mosher also announced the association of John B. Hartnett with the Company in an executive sales and advertising capacity.

Web Offset Presses

We specialize in Web fed offset presses for all kinds of unusual work. If you will send us details and samples of your particular line of product, we will gladly describe **THE NEW ERA PRESS**, best adapted for your purposes. Web offset presses are noted for their speed and economy of operation.

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375 Eleventh Avenue, Paterson, New Jersey

Exclusive Selling Agents: John Griffiths Co., Inc., 145 Nassau St., New York City

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THE PHOTO-LITHOGRAPHER

LITHOGRAPHIC EQUIPMENT

IN the pages that follow THE PHOTO-LITHOGRAPHER takes pleasure in presenting a pictorial story of the latest achievements of the lithographic equipment industry, covering the full range of equipment currently offered for sale to the lithographer.

Press Specifications.....	88-89	Repro-Art Machinery Co.....	125-130
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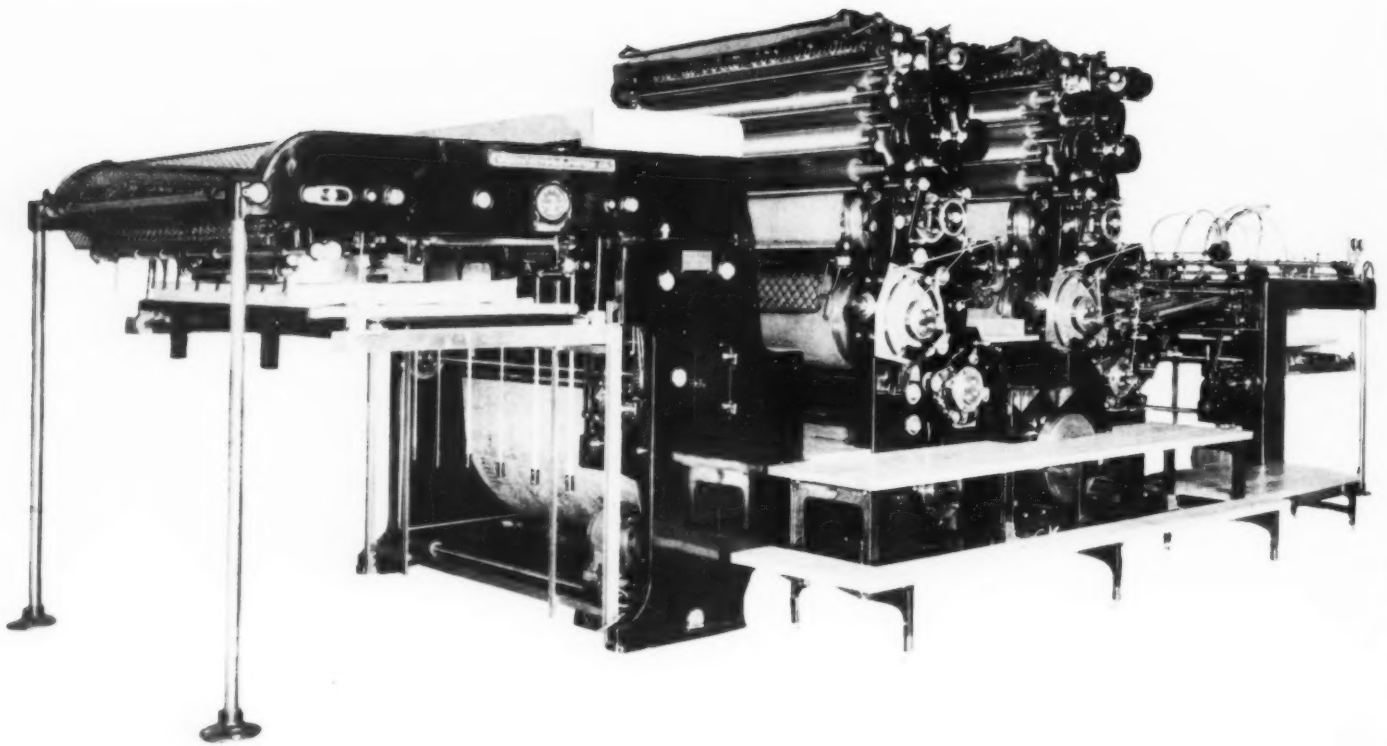
HARRIS OFFSET PRESSES

Press Designation	Sheet Size Limits	Maximum Size Print	Minimum Gripper Margin	Plate Dimensions	Plate Thickness	Cut of Plate Cyl.	Blanket Dimensions	Blanket Thickness	Cut of Blanket Cyl.	Speed Range	Feeder	Feeder Capacity
17x22 Harris LSB—Single Color	8½x11 to 17½x22½	17½x22½	5-16"	19½x23	.010" to .012"	.015"	23¾x23	.062" to .065"	.075"	Up to 7000	Harris Auto. Suction File	20"
19x25 Harris CL—Single Color	8½x11 to 21x26	20x25	5-16"	24x26	.012"	.015"	29x26	.062" to .065"	.075"	Up to 6000	Harris Auto. Suction File	42"
22x34 Harris EL—Single Color	8½x11 to 23x36	22½x35	5-16"	25½x36	.012"	.015"	29½x36	.062" to .065"	.075"	Up to 6000	Harris Auto. Suction File	42"
32x44 Harris LSC—1-Color LSD—2-Color 3-Color LSE—4-Color	17x22 to 35x45	34½x45	5-16"	39x46	.014"	.020"	45½x46½	.062" to .065"	.075"	Up to 5000	Harris Auto. Suction File	42"
38x52 Harris LB—1-Color GT—2-Color HT—3-Color JT—4-Color	22x34 to 41x54	39½x53	5-16"	45½x54	.014"	.020"	51x54½	.062" to .065"	.075"	Up to 4500	Harris Auto. Suction File	42"
44x64 Harris LSF—1-Color LSG—2-Color 3-Color LSH—4-Color	25x38 to 46½x68½	46½x68	5-16"	49½x68½	To Customer's Specifications		57x68½	.062" to .065"	.075"	Up to 4000	Harris Auto. Suction File	49"
HOE												
30x42" Single Color Super-Offset Press	17x22 to 32x43	29¾x42¾	5-16"	34x43	As specified by purchaser		42x43½	As specified by purchaser		Up to 5000	Dexter	37"
41x54" Single Color Super-Offset Press	19x25 to 42x55½	41½x55	5-16"	45½x55½	As specified by purchaser		54x55½	As specified by purchaser		Up to 4500	Dexter	43"
41x54" Two-Color Super Offset Press	19x25 to 42x55½	41½x55	5-16"	45½x55½	As specified by purchaser		54x55½	As specified by purchaser		Up to 4000	Dexter	43"
MIEHLE												
Miehle Offset No. 44	16x24 to 29x43	28½x42	¾"	34x43½	.018"	.018"	32½x44	.062" to .063"	.076"	Up to 5000	Dexter	32"
Miehle Offset No. 57	19x25 to 41½x55½	41x55	¾"	45x58	.020"	.020"	47x57	.062" to .063"	.080"	Up to 4500	Dexter	44"
Miehle Offset No. 69	24x34 to 46½x67½	46x67	¾"	50x68	.020"	.020"	51x68	.062" to .063"	.080"	Up to 4100	Dexter	44"
WEBENDORFER												
12x18"	5x8 to 12¾x18	12¾x18	3-16"	15¼x17¾	.012"	.015"	18¼x16¼	3 Ply	.071"		Webendorfer Vacuum Air	18"
Webendorfer 14x20"	8x10 to 16x22	14x20	3-16"	17½x20¼	.012"	.015"	20¾x21¼	3 Ply	.071"		Webendorfer Vacuum Air	18"
Webendorfer 20x26"	11x17 to 22x26	20x26	3-16"	26¼x24¼	.012"	.015"	26¼x26	3 Ply	.071"		Webendorfer Vacuum Air	23"
WILLARD												
22x30"	11x17 to 22x30	21¾x29	5-32"	24¼x30	.012"	.017" or optional	26x30	.062"	.075"	Up to 6000 close register 4500	Dexter Reloading Suction File	40"
RUTHERFORD												
20x26"	20x26	19½x25	¼"	22½x27	.012"	.012"	27x25	.062"	.075"	Up to 6000 close register 5000	Rutherford Suction File	32"
Rutherford 20x29"	20x29	19½x28	¼"	22½x30	.012"	.012"	30x25	.062"	.075"	Up to 6000 Close register 5000	Rutherford Suction File	32"

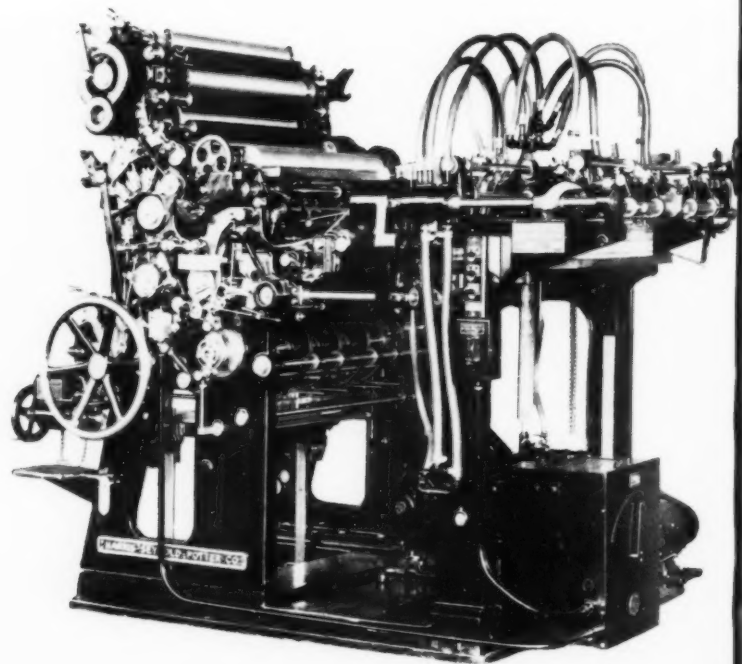
Press Specification Chart

Delivery Capacity	Delivery	Number and Sizes of Covered Inking Rollers	Number and Size of Covered Dampeners	Approximate Weight	Approximate Floor Space	Electrical Specifications
20"	Ext. Pile	3 Form 2 9-16" 5 Distrs. 2 1/2" 1 Ductor 2 1/2"	2 Dampeners 2 1/4" 1 Ductor 2 1/4"	4700 lbs.	4-1'x6-7'	Press: 3 H. P. variable speed motor. Feeder: 1/2 H. P. constant speed motor.
42"	Ext. Pile	4 Form 2 9-16" 6 Distrs. 2 1/2" 1 Ductor 2 1/2"	2 Dampeners 3 1-16" 1 Ductor 3 1-16"	9200 lbs.	6-3'x10-4'	Press: 3 H. P. variable speed motor. Feeder: 1 H. P. constant speed motor.
42"	Ext. Pile	4 Form 2 9-16" 6 Distrs. 2 1/2" 1 Ductor 2 1/2"	2 Dampeners 3 1-16" 1 Ductor 3 1-16"	10100 lbs.	7-1'x10-7'	Press: 3 H. P. variable speed motor. Feeder: 1 H. P. constant speed motor.
42"	Ext. Pile	(For each color) 4 Form 3 1/4" 9 Distrs. 2 1/2" 1 Ductor 2 1/2"	(For each color) 2 Dampeners 3 1-16" 1 Ductor 3 1-16"	1-col. 23000 lbs. 2-col. 35700 lbs. 3-col. 59000 lbs. 4-col. 76000 lbs.	1-col. 9-11'x21-2" 2-col. 10-5'x25-9" 3-col. 11-9'x29-3" 4-col. 11-9'x32-2"	Press: 1-col. 7 1/2 H. P.; 2-col. 10 H. P.; 3-col. 15 H. P.; 4-col. 20 H. P., variable speed motor. Feeder: 2 H. P. constant speed motor.
42"	Ext. Pile	(For each color) 4 Form 3 1/4" 10 Distrs. 2 1/2" 1 Ductor 2 1/2"	(For each color) 2 Dampeners 3 1-16" 1 Ductor 3 1-16"	1-col. 24100 lbs. 2-col. 38000 lbs. 3-col. 59000 lbs. 4-col. 81000 lbs.	1-col. 10-7'x21-6" 2-col. 11-1'x26-2" 3-col. 12-4'x29-9" 4-col. 12-4'x33-7"	Press: 1-col. 7 1/2 H. P.; 2-col. 10 H. P.; 3-col. 15 H. P.; 4-col. 20 H. P., variable speed motor. Feeder: 2 H. P. constant speed motor.
49"	Ext. Pile	(For each color) 4 Form 3 1/4" 7 Distrs. 3 1/2" 1 Ductor 3 1/2"	(For each color) 2 Dampeners 3 9-16" 1 Ductor 3 9-16"	1-col. 45000 lbs. 2-col. 72000 lbs. 3-col. 98000 lbs. 4-col. 125000 lbs.	1-col. 13-1'x25-8" 2-col. 14-4'x31-7" 3-col. 14-4'x36-8" 4-col. 14-4'x41-9"	Press: 1-col. 10 H. P.; 2-col. 15 H. P.; 3-col. 20 H. P.; 4-col. 25 H. P., variable speed motor. Feeder: 3 H. P. constant speed motor. Delivery: 2 H. P. constant speed motor.
37"	Ext. Pile	4 Form 3 1/2" 5 Distrs. 3 1/2" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	24000 lbs.	19-7'x9-3"	7 1/2 H. P. variable speed control.
43"	Ext. Pile	5 Form 3 1/2" 5 Distrs. 3 1/2" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	36500 lbs.	22-10'x11-3"	7 1/2 H. P. variable speed control.
43"	Ext. Pile	(For each color) 5 Form 3 1/2" 5 Distrs. 3 1/2" 1 Ductor 3 1/2"	For each color 2 Form 3 1/2" 1 Ductor 3 1/2"	69500 lbs.	27-7'x13-0"	10 H. P. variable speed control.
32"	Pile	4 Form 3 1/4" 4 Form Riders 2 3/8" 3 Drum 2 3/8" 1 Ductor 2 3/8"	2 Form 3 1/4" 1 Ductor 2 1/4"	1-col. 19500 lbs. 2-col. 32000 lbs. 3-col. 46000 lbs. 4-col. 60000 lbs.	1-col. 16-10'x10-0" 2-col. 20-10'x10-0" 3-col. 24-9'x10-0" 4-col. 28-9'x10-0"	1-col. 7 1/2 H. P. 2-col. 7 1/2 H. P. 3-col. 10 H. P. 4-col. 15 H. P.
44"	Pile	4 Form 3 1/4" 4 Form Riders 3 1/2" 3 Drum 2 3/4" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	1-col. 31000 lbs. 2-col. 54000 lbs. 3-col. 77000 lbs. 4-col. 100000 lbs.	1-col. 22-0'x12-6" 2-col. 27-8'x12-6" 3-col. 32-10'x12-0" 4-col. 38-0'x12-6"	1-col. 10 H. P. 2-col. 20 H. P. 3-col. 30 H. P. 4-col. 40 H. P.
44"	Pile	4 Form 3 1/2" 4 Distributors 3 1/2" 3 Drum 2 3/4" 1 Ductor 3 1/2"	2 Form 3 1/2" 1 Ductor 3 1/2"	1-col. 37000 lbs. 2-col. 65000 lbs. 3-col. 102000 lbs. 4-col. 134000 lbs.	1-col. 25-4'x13-5" 2-col. 31-4'x13-5" 3-col. 37-4'x13-5" 4-col. 43-4'x13-5"	1-col. 10 H. P. 2-col. 20 H. P. 3-col. 30 H. P. 4-col. 40 H. P.
18"	Chain Pile	2 Form	2 Plate 2 1/4" 1 Ductor 2 1/4"	1500 lbs.	3-2'x4'	1/2 H. P.-1/2 H. P.
18"	Chain Pile	3 Form	2 Plate 2 1/4" 1 Ductor 2 1/4"	3300 lbs.	3-9'x5-1"	1/2 H. P.-1 H. P.
23"	Chain Pile	4 Form	2 Plate 2 1/4" 1 Ductor 2 1/4"	6000 lbs.	6'x6'	1/2 H. P.-2 H. P.
40"	Receding Auto Pile 4 sets patented spring grippers	4 Form 2 1/2" 1-7" Drum 3-3 1/4" Drums 5 Distributors 2 1/2" 1 Ink Ductor 2 1/2" 5 Riders	2 Plate 2 1/2" 1 Ductor 2 1/2"	7000 lbs.	5'x8'	3 H. P. Press. 1/2 H. P. Blower.
32"	Receding Auto Pile	3 Form 2 1/2" 7 Distributing 2 1/2" 1 Distributing 2 1/2" 1 Ductor 2 1/2"	2-2 1/2" diam. Damp. 1-2 1/2" diam. Ductor	8800 lbs.	4-8'x9-6"	2 H. P. D. C. } Press 3 H. P. A. C. } 1 1/2 H. P. Feeder
32"	Receding Auto Pile	3 Form 2 1/2" 7 Distributing 2 1/2" 1 Distributing 2 1/2" 1 Ductor 2 1/2"	2-2 1/2" diam. Damp. 1-2 1/2" diam. Ductor	9300 lbs.	5-1'x9-6"	2 H. P. D. C. } Press 3 H. P. A. C. } 1 1/2 H. P. Feeder

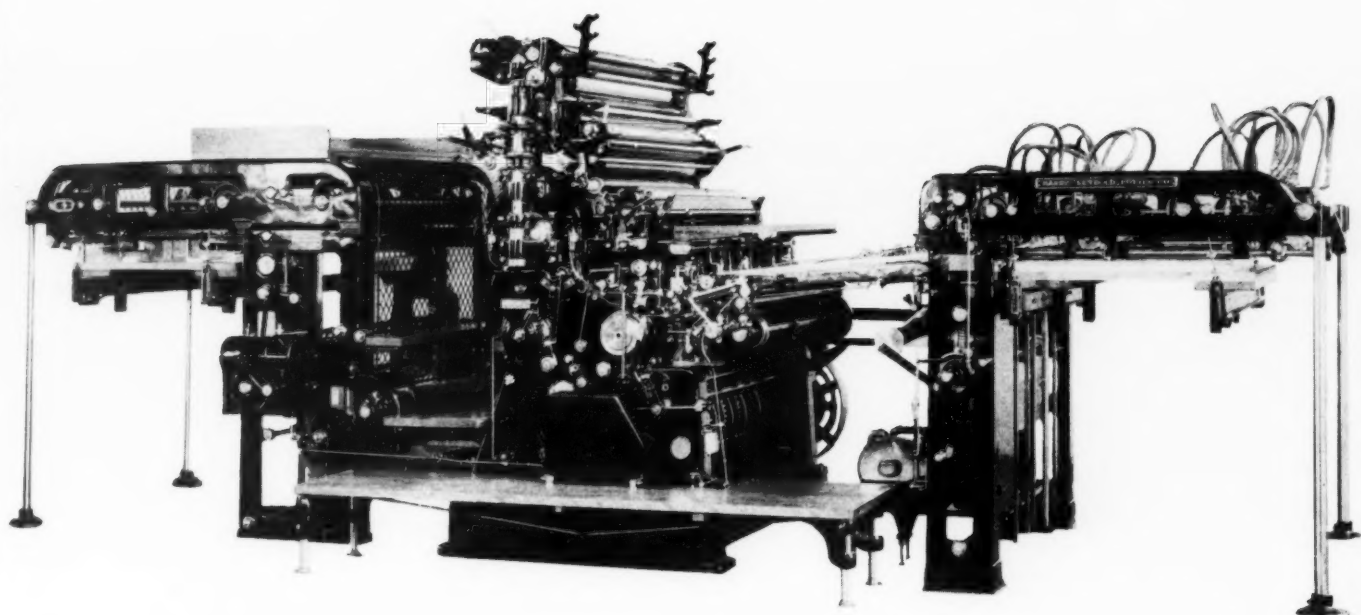
NEW HARRIS LSK
42 x 58 TWO-COLOR OFFSET PRESS
Featuring New Streamline Feeder



HARRIS LSB
17 x 22
SINGLE COLOR



Harris-Seybold-Potter Offset Presses

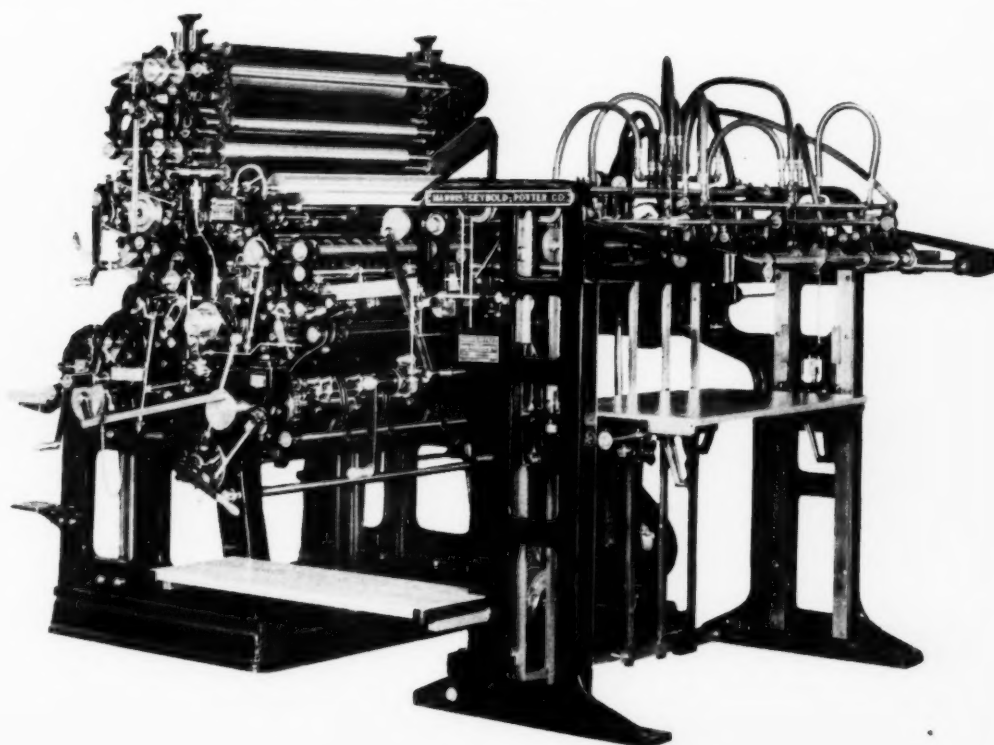


LSC 32 x 44 SINGLE COLOR

EL

22 x 34

SINGLE COLOR

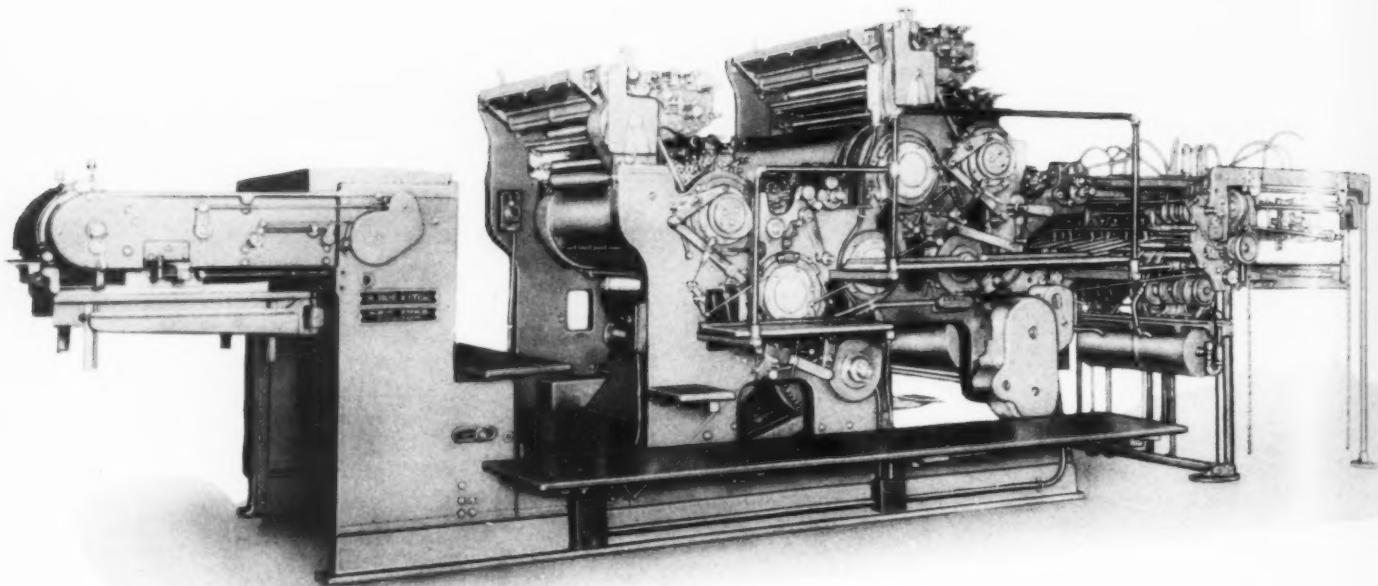


SPECIFICATIONS OF FULL LINE

	17 x 22 LSB—1 Color	21 x 28 LSN—1 Color	22 x 34 EL—1 Color
NORMAL STOCK SIZE.....	8½" x 11" to 17" x 22"	8½" x 11" to 21" x 28"	10" x 14" to 22" x 34"
MAXIMUM STOCK SIZE.....	17½" x 22½"	22" x 30"	23" x 36"
NORMAL TRANSFER SIZE.....	16½" x 22"	20½" x 28"	21½" x 34"
MAXIMUM TRANSFER SIZE.....	17½" x 22½"	21½" x 29"	22½" x 35"
PLATE SIZE.....	19½" x 23"	24½" x 30"	25½" x 36"
BLANKET SIZE.....	23½" x 23"	26½" x 30"	29½" x 36"
SPEED (SHEETS PER HOUR):			Feed Rolls 5000 4500
Normal Register.....	7000	6500	5000
Accurate Register.....	6000	5500	4500
PILE FEEDER.....	Harris (Maximum Pile 20")	Harris (Maximum Pile 21")	Harris (Maximum Pile 42")
REGISTERING MECHANISM.....	Tumbler Grippers	Tumbler Grippers	Feed Rolls or Swing Feed Optional
DELIVERY.....	Harris Receding Pile Delivery (Maximum Pile 18")	Harris Receding Pile Delivery (Maximum Pile 16")	Harris Receding Pile Delivery (Maximum Pile 20")
INK DISTRIBUTION:			
Form Rollers (Covered).....	3—2½"	3—3"	4—2½"
Distribution Rollers (Covered).....	5—2½"	5—2½"	6—2½"
Duct Rollers (Covered).....	1—2½"	1—2½"	1—2½"
Storage Rollers.....	2—3"	2—3½"	2—3½"
Rider Rollers.....	2—1"	2—1½"	1—2½", 3—1½"
Drums.....	1—3", 1—5.8"	1—3½", 1—6.8"	1—7½", 1—5"
Auto Vibrating Rollers.....			
Extra—Form Rollers (Bare).....	3	3	4
Duct Rollers (Bare).....	1	1	1
Distribution Rollers (Bare).....			
WATER DISTRIBUTION:			
Dampening Rollers (Covered).....	2—2½"	2—2½"	2—3½"
Duct Rollers (Covered).....	1—2½"	1—2½"	1—3½"
Intermediate Roller (Aluminum).....	1—2½"	1—2½"	1—3"
Water Pan Roller.....	1—3½"	1—3½"	1—4"
Extra—Dampening Rollers (Covered).....	2	2	2
Duct Rollers (Covered).....	1	1	1
POWER REQUIRED:			
Drive Motor.....	1 Color 2 Color 3 Color 4 Color	3 H.P.	3 H.P.
Feeder Motor.....		½ HP.	1 H.P.
Delivery Motor.....			
FLOOR SPACE.....	1 Color 2 Color 3 Color 4 Color	4'1" x 6'7"	5'6" x 8'8"
HEIGHT.....	1 Color 2 Color 3 Color 4 Color	5'8"	6'2"
BASE.....	1 Color 2 Color 3 Color 4 Color	3'3" x 4'9"	4'2" x 6'2½"
NET WEIGHT, POUNDS.....	1 Color 2 Color 3 Color 4 Color	4725	6200
SHIPPING WEIGHT, POUNDS (DOMESTIC).....	1 Color 2 Color 3 Color 4 Color	5725	7500
SHIPPING WEIGHT, POUNDS (EXPORT).....	1 Color 2 Color 3 Color 4 Color	6625	8100
CUBIC MEASUREMENT, CU. FT. (EXPORT).....	1 Color 2 Color 3 Color 4 Color	250	325

LIT HARRIS OFFSET PRESSES

22 x 34	35 x 45	41 x 54	42 x 58	46½ x 68½
L—1 Color	LSC—1 Color LSD—2 Color 3 Color LSE—4 Color	LB—1 Color GT—2 Color HT—3 Color JT—4 Color	LSJ—1 Color LSK—2 Color LSL—3 Color LSM—4 Color	LSF—1 Color LSG—2 Color 3 Color LSH—4 Color
4" to 22" x 3	17" x 22" to 32" x 44"	22" x 34" to 38" x 52"	22" x 34" to 42" x 58"	25" x 38" to 46" x 67½"
23" x 36"	35" x 45"	41" x 54"	42" x 59"	46½" x 68½"
23½" x 34"	31½" x 44"	37½" x 52"	41½" x 58"	45½" x 67½"
2½" x 35"	34½" x 45"	40½" x 53"	41½" x 58½"	46½" x 68"
2½" x 36"	39" x 46"	45½" x 54"	47¼" x 59"	49½" x 68½"
¼" x 36"	45½" x 46½"	51" x 54½"	52¼" x 59½"	57" x 68½"
Swing Feed 5000 4500	Feed Rolls 5000 4500 Three Point Register 4500 4000	Feed Rolls 4500 4000 Three Point Register 4000 3500	5500 4500	Feed Rolls 4000 3500 Three Point Register 3500 3000
Harris um Pile 42"	Harris (Maximum Pile 42")	Harris (Maximum Pile 42")	Harris—H.T.B. (Maximum Pile 42")	Harris (Maximum Pile 49")
Rolls or ing Feed Optional	Feed Rolls or Three Point Register Optional	Feed Rolls or Three Point Register Optional	Feed Rolls or Three Point Register Optional	Feed Rolls or Three Point Register Optional
s Receding Delivery um Pile 20"	Harris Receding Pile Delivery (Maximum Pile 44")	Harris Receding Pile Delivery (Maximum Pile 44")	Harris Receding Pile Delivery (Maximum Pile 44")	Harris Receding Pile Delivery (Maximum Pile 49")
2½" 2½" 2½" 2½" 3½" 3½", 3-1½" 2, 1-5"	(For Each Color) 4—3½" 9—2½" 1—2½" 2—4½" 3—1½" 1—3½", 1—10½", 1—4½" 2—3½" 4 (Each Color) 1 (1 & 2 Color), 2 (3 & 4 Color) 1 (1 & 2 Color), 2 (3 & 4 Color)	(For Each Color) 4—3½" 10—2½" 1—2½" 2—4½" 2—3½", 6—1½" 1—7½", 1—10½" 4 (Each Color) 1 (1 & 2 Color), 2 (3 & 4 Color) 1 (1 & 2 Color), 2 (3 & 4 Color)	(For Each Color) 4—4½" 5—4" 1—4" 2—6.419" 1—1½" 1—10.270", 1—4½" 3—3½" 4 (Each Color) 1 (1 & 2 Color), 2 (3 & 4 Color)	(For Each Color) 4—3½" 7—3½" 1—3½" 2—6.007" 1—1½" 1—4½", 1—9½" 2—3½" 4 (Each Color) 1 (1 & 2 Color), 2 (3 & 4 Color)
4 1	(For Each Color) 2—3½" 1—3½" 1—3" 1—4" (For Each Color) 2 1	(For Each Color) 2—3½" 1—3½" 1—3" 1—4" (For Each Color) 2 1	(For Each Color) 1—3½", 1—3½" 1—3½" 1—3" 1—4" (For Each Color) 2 1	(For Each Color) 2—3½" 1—3½" 1—4" 1—4" (For Each Color) 2 1
H.P.	7½ H.P. 10 H.P. 15 H.P. 20 H.P. 2 H.P. 1 H.P.	7½ H.P. 10 H.P. 15 H.P. 20 H.P. 2 H.P. 1 H.P.	10 H.P. 15 H.P. 3 H.P. 2 H.P.	15 H.P. 20 H.P. 25 H.P. 30 H.P. 3 H.P. 2 H.P.
10'7"	9'11" x 21'2" 10' 5" x 25'9" 11' 9" x 29'3" 11' 9" x 33'2"	10'7" x 21'7" 11'1" x 26'2" 12'4" x 29'8" 12'4" x 33'7"	12'4" x 23'7" 14'0" x 27'7"	13'1" x 25'8" 14'4" x 31'7" 14'4" x 36'8" 14'4" x 41'9"
11"	8'2½" 8'4½" 9'0" 9'0"	7'10" 8'4½" 8'8" 8'8"	9'2" 9'2"	8'10" 10' 5" 10' 5" 10' 5"
x 3'6"	6'3" x 4'6" 6'3" x 6'8" 6'3" x 11'2" 6'3" x 15'1"	6'10" x 4'5" 6'10" x 6'7" 6'10" x 11'2" 6'10" x 15'1"	7'5½" x 4'7½" 7'3½" x 7'9½"	8'3" x 5'2" 8'3" x 8'6" 8'3" x 13'7" 8'3" x 18'8"
100	23,000 35,700 59,000 76,000	24,100 38,000 63,000 81,000	34,000 57,000	45,000 72,000 98,000 125,000
600	27,300 43,100 70,000 88,000	28,500 46,200 74,000 95,000	65,000	50,000 82,000 115,000 150,000
00	31,200 51,000 79,000 100,000	33,300 55,500 85,000 109,000	73,000	55,000 92,000 133,000 175,000
5	850 1200 1900 2350	920 1300 2100 2600	1500	1200 1800 2400 3000

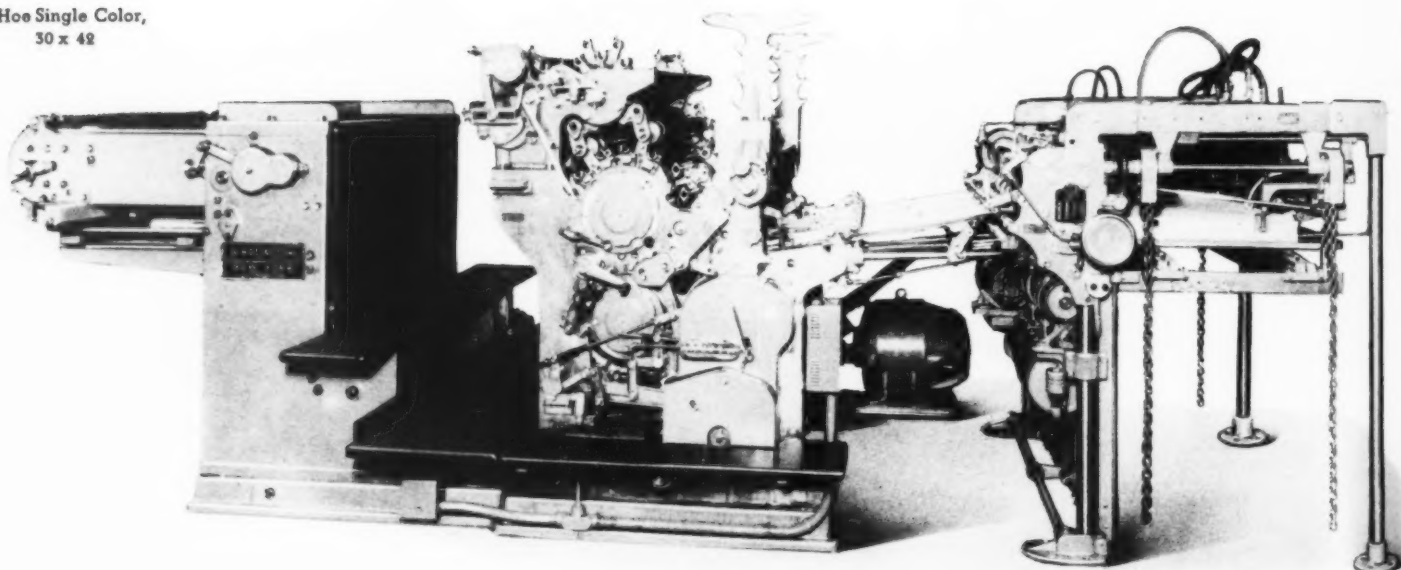


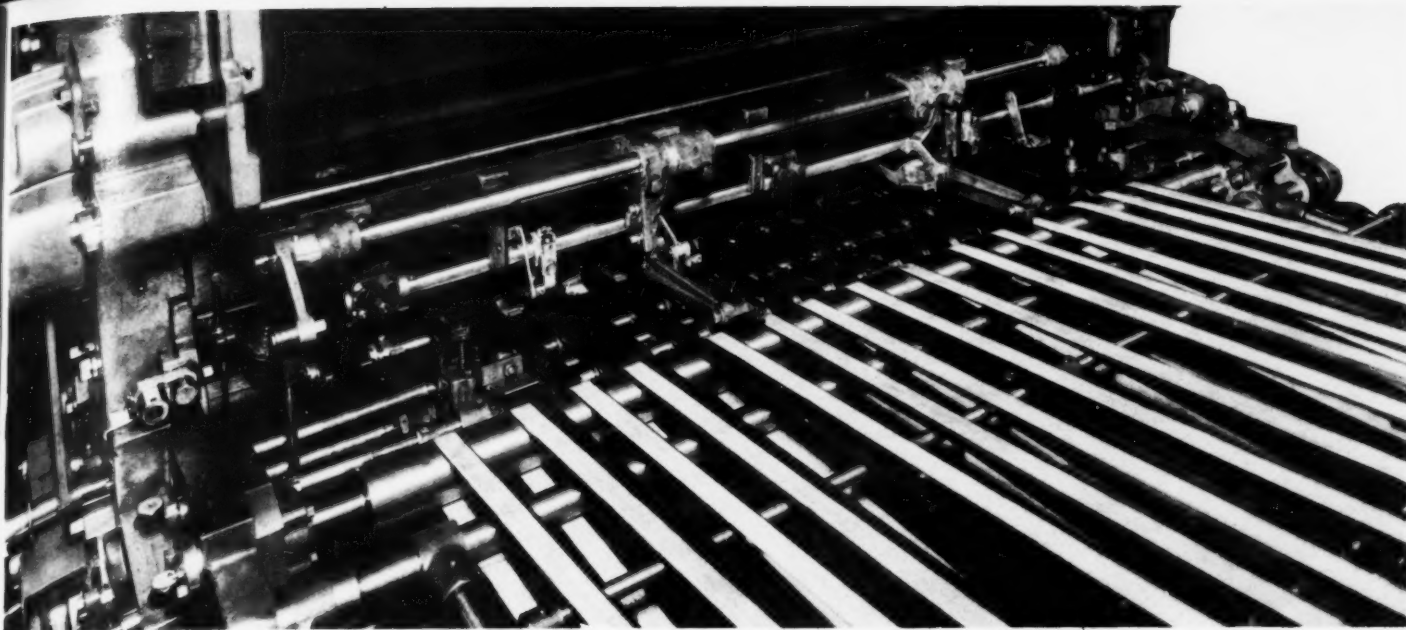
Hoe Two-Color,
Super-Offset Press,
41 x 54



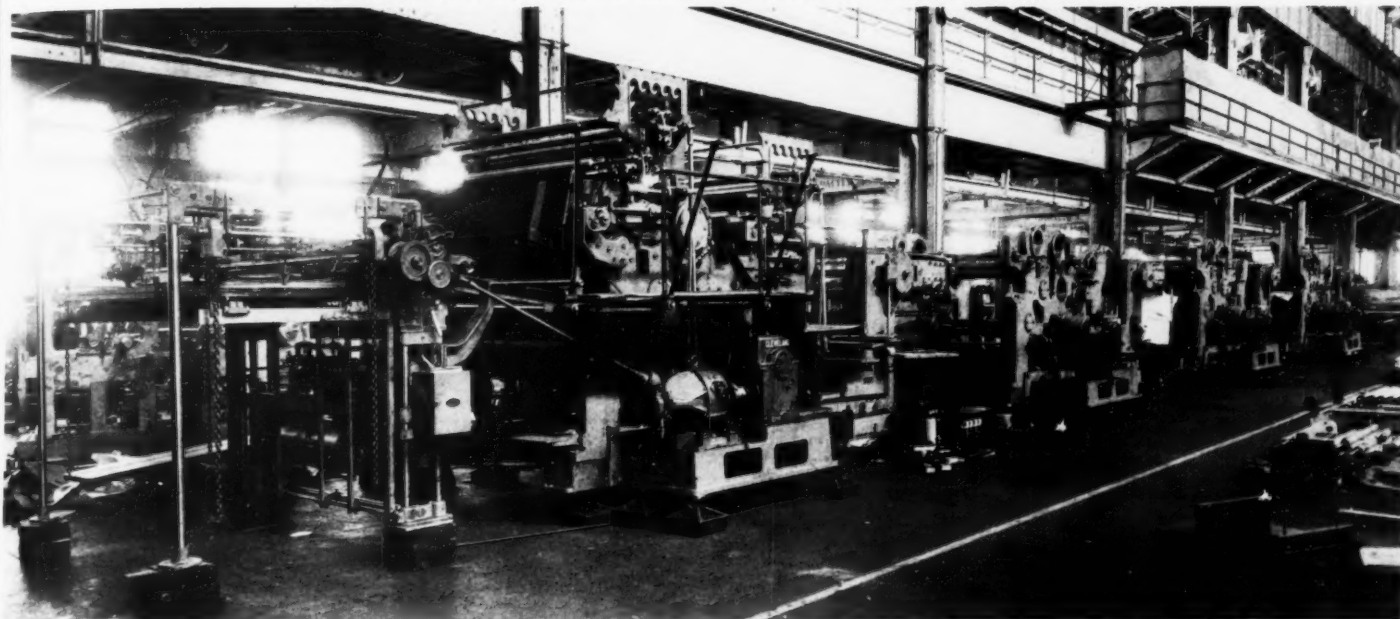
Hoe Single Color,
41 x 54

Hoe Single Color,
30 x 42

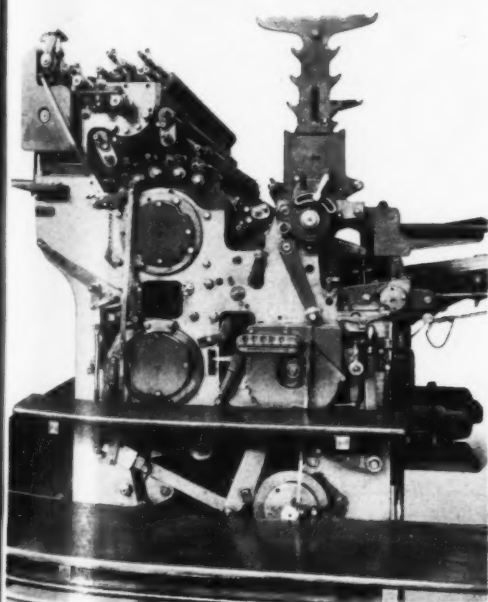




PATENTED HOE SLOW-DOWN AND THREE-POINT REGISTER MECHANISM



GROUP OF TWO-COLOR SUPER-OFFSET PRESSES UNDER CONSTRUCTION IN HOE FACTORY

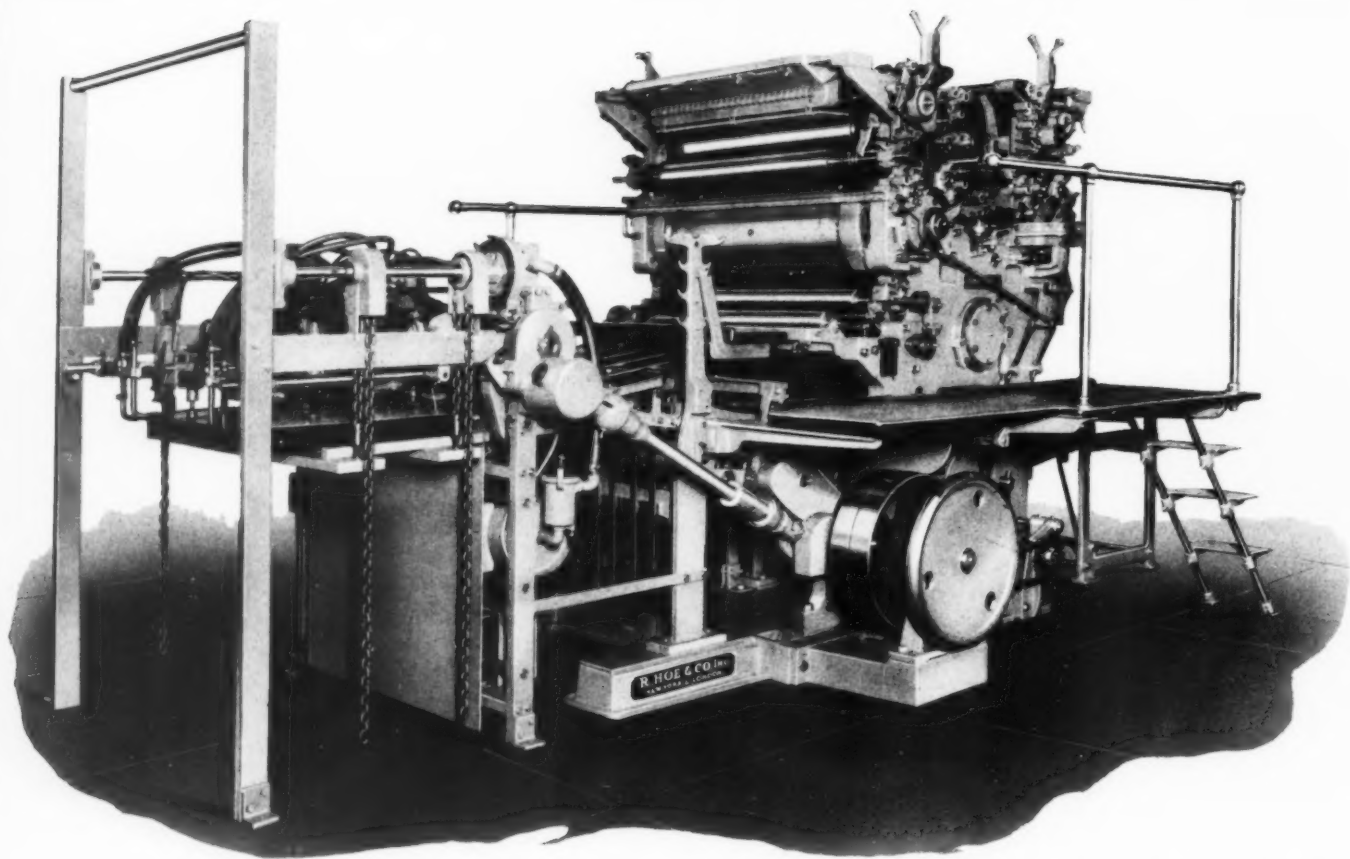


Hoe Single-Color Super-Offset Unit. Unencumbered Exterior. Uncapped Cylinder Housing Openings in the Solid Side Frame.



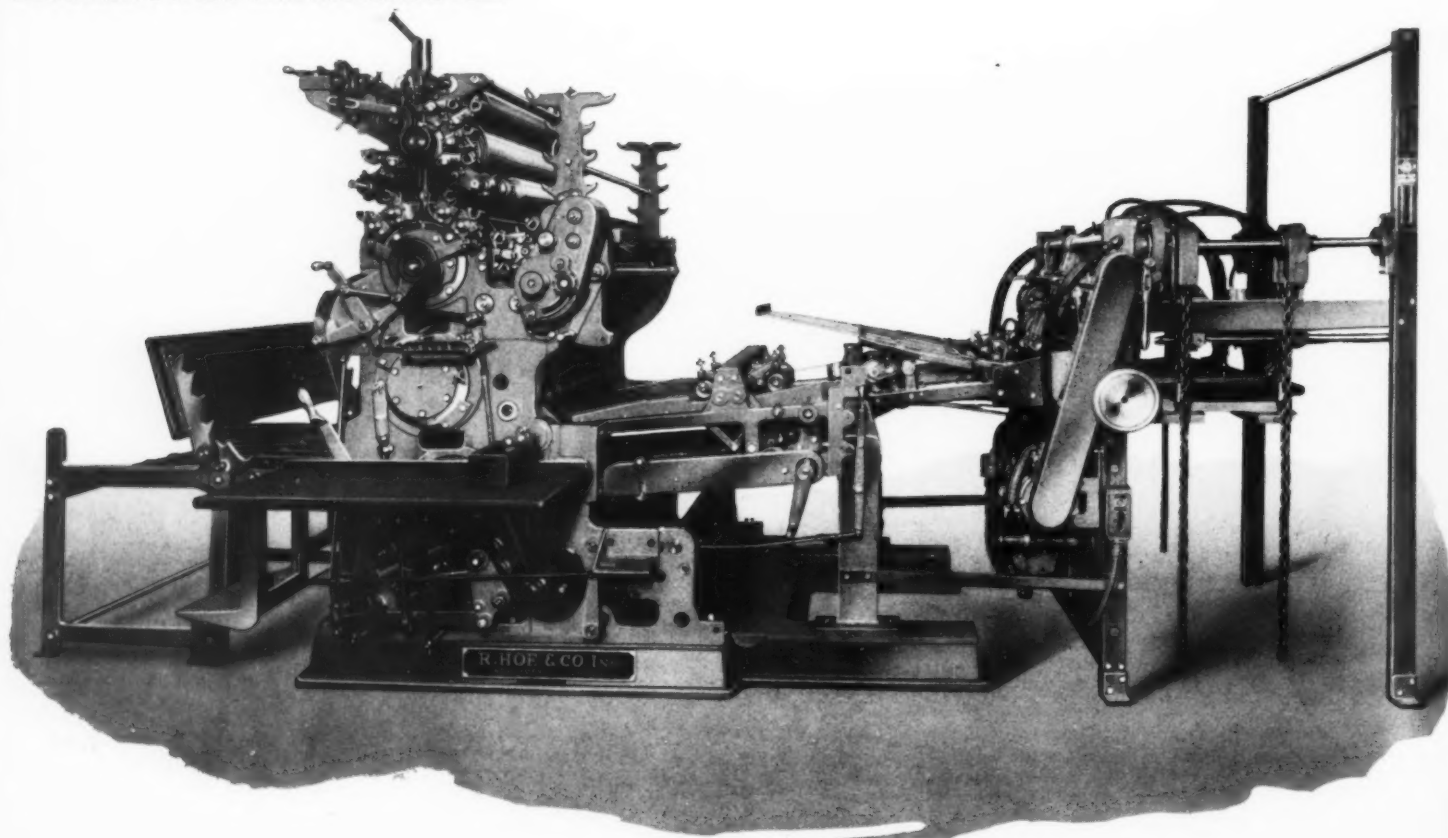
(Above) Hoe Super-Offset Press Impression Cylinder, Showing Patented Gripper and Actuating Mechanism.

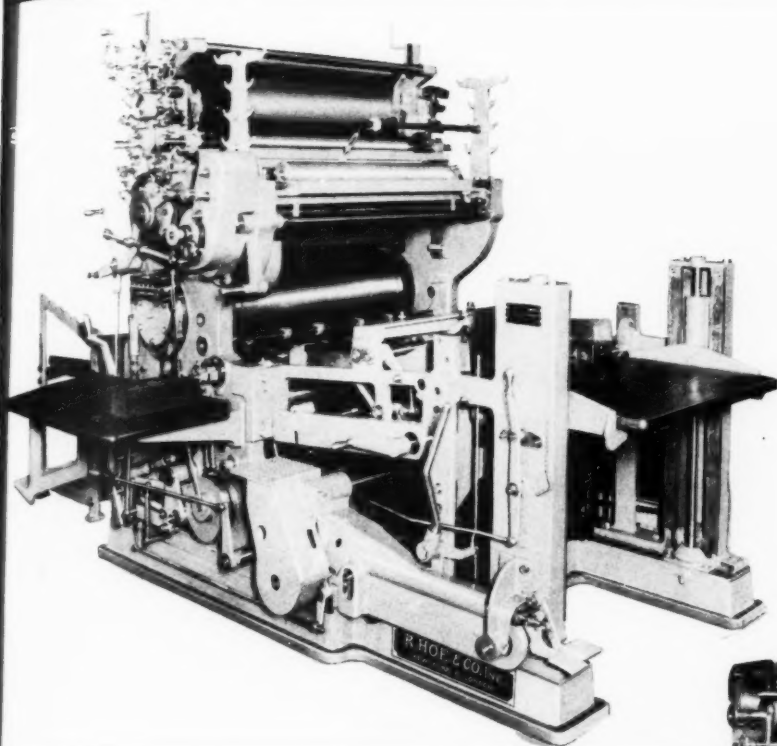
(Below) Hoe Super-Offset Plate Cylinder, Showing Quick-Acting Plate Clamps, Anti-Friction Bearing and Wide, Fine-Tooth Helical Gear.



**HOE TWO-COLOR SUPER-OFFSET METAL
DECORATING PRESS WITH AUTOMATIC FEED**

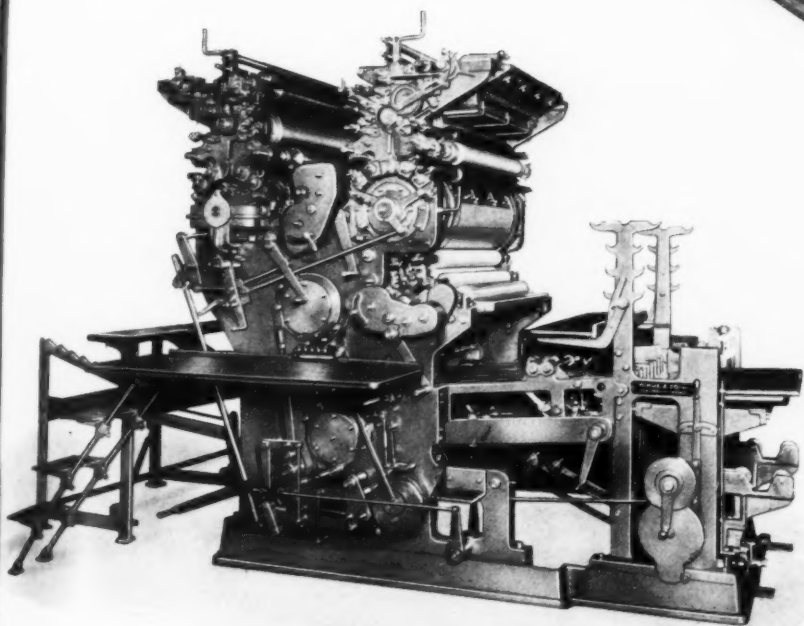
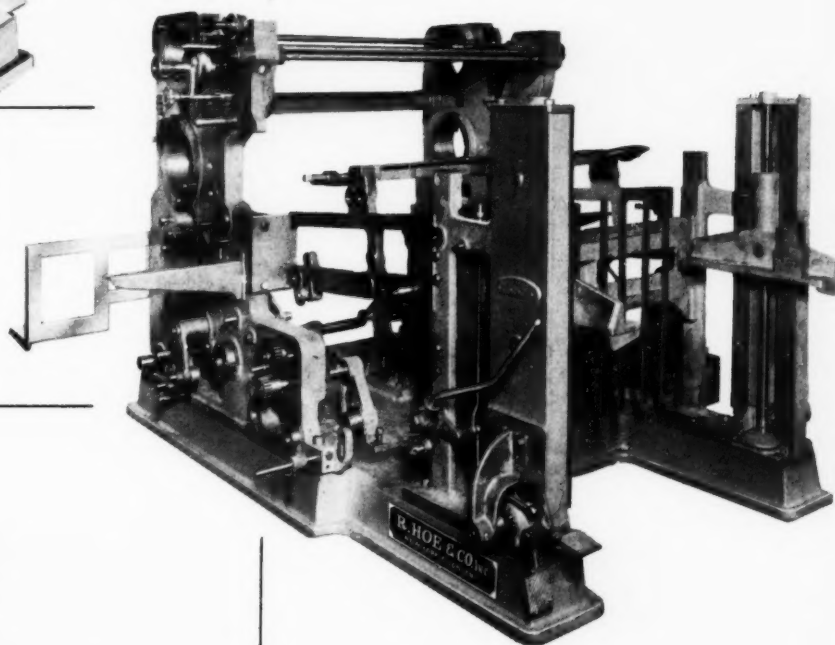
**HOE SINGLE-COLOR SUPER-OFFSET METAL
DECORATING PRESS WITH AUTOMATIC FEED**



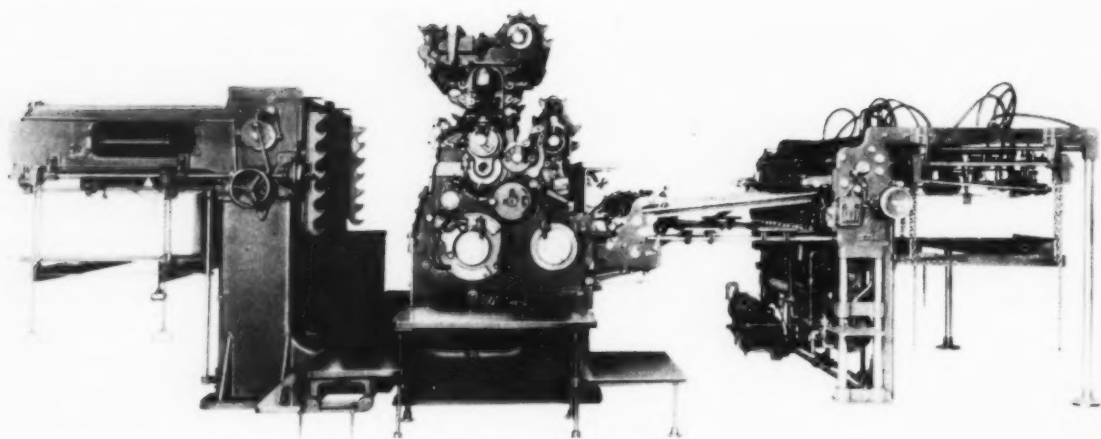


HOE SINGLE COLOR SUPER-OFFSET
METAL DECORATING PRESS AR-
RANGED FOR HAND FEED, WITH
AUTOMATIC PILE ELEVATOR.

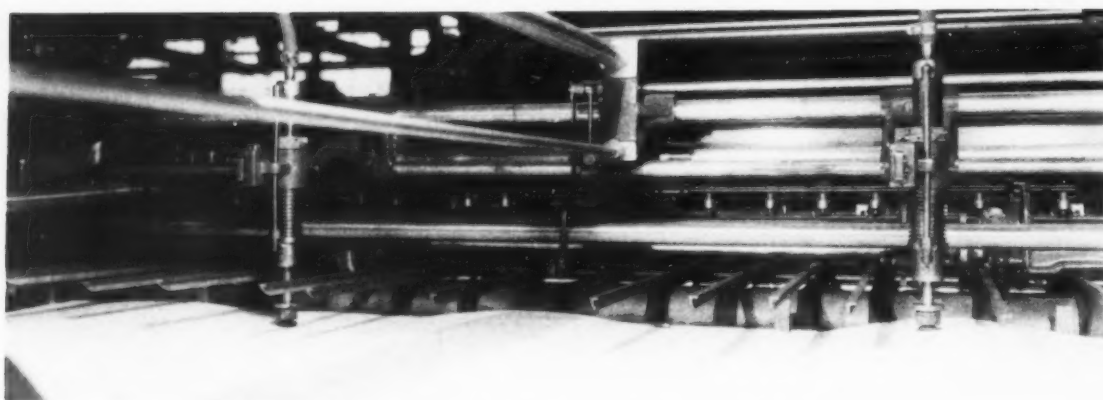
FRAMEWORK OF HOE SINGLE
COLOR METAL DECORATING PRESS
SHOWING ONE-PIECE BASE, UN-
CAPPED CYLINDER BEARING
OPENINGS.



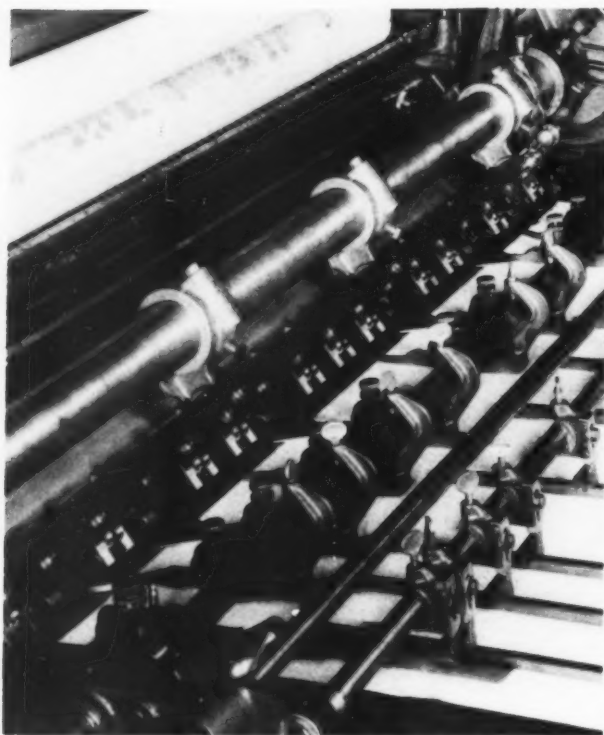
HOE TWO-COLOR SUPER-OFFSET
METAL DECORATING PRESS—
HAND FEED.



Miehle Single-Color Offset Press



Improved Dexter Forwarders Compensate for Uneven Height of Pile



Rotary Slow-Down and Gripper Mechanism
Just Before Receiving Sheet



Grippers Close After Sheet Has Been Registered While
Both the Sheet and Rotary Slow-Down and Gripper
Mechanism Are at Rest



Ample Working Space Between All Units
of Multi-Color Miehle Offset Presses

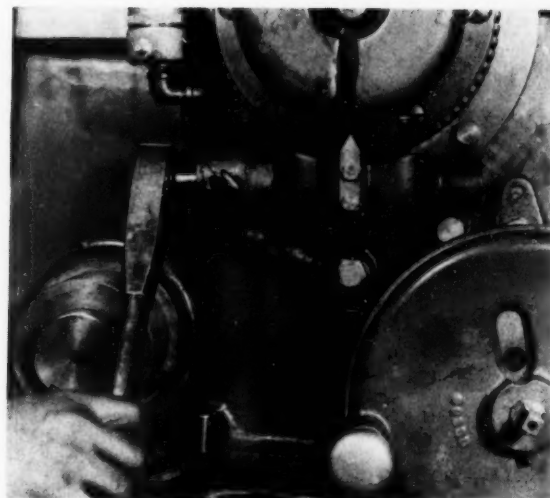
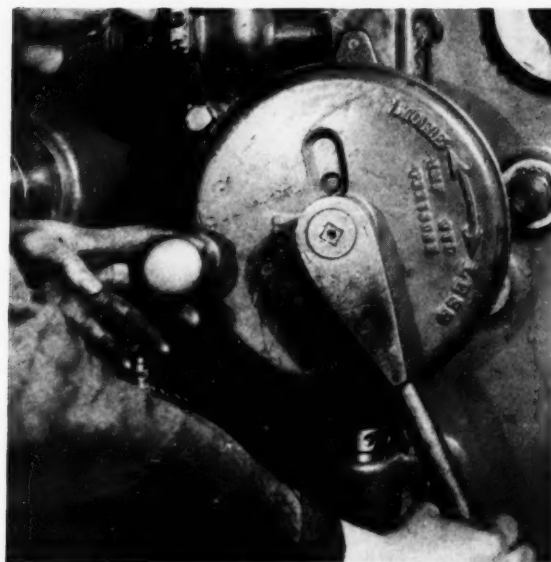
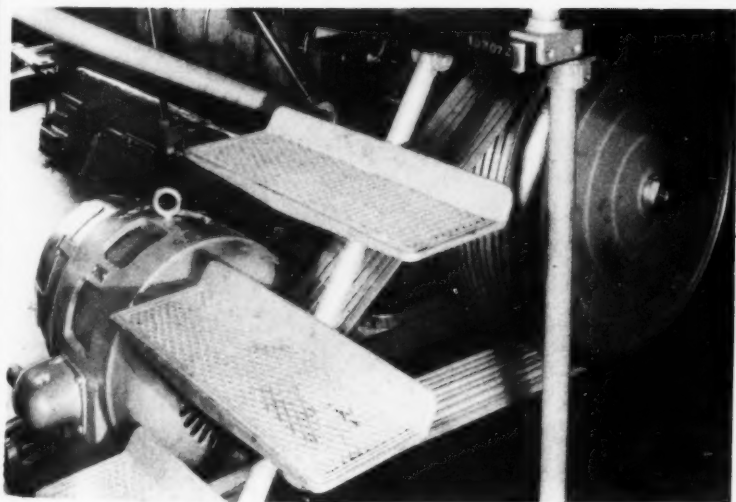


Plate Cylinder Can Be Quickly Shifted
Endwise for Side Register



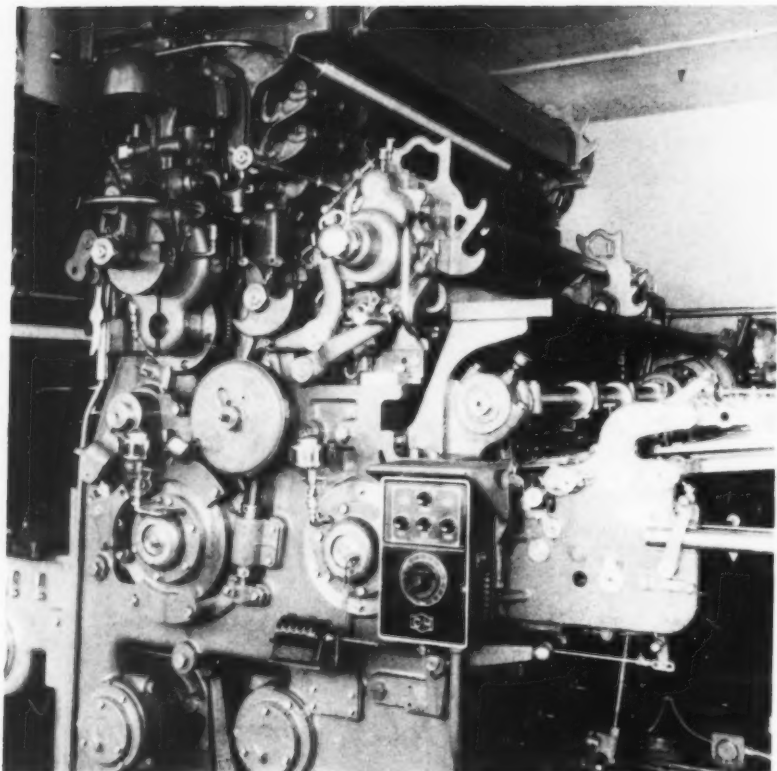
Speedy — Positive Adjustment of Pressure When Changing
From One Thickness of Stock to Another



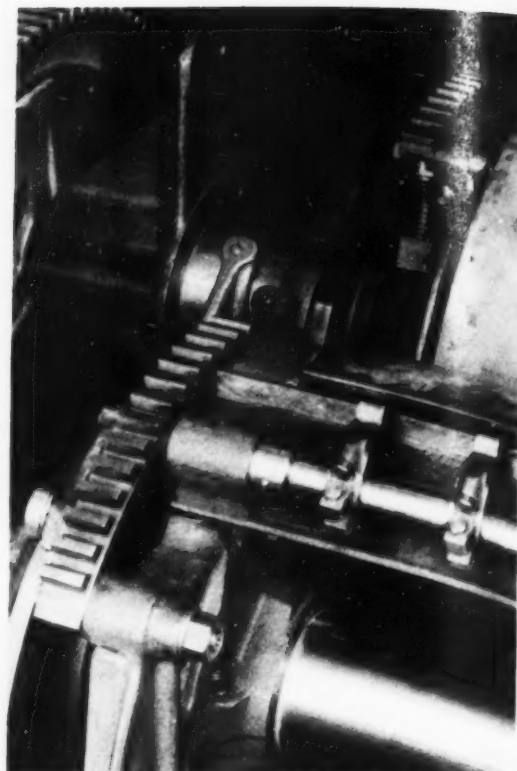
Powered by Kimble Motors — Multiple "V" Belt Drive



Plate Cylinder Can be Conveniently Shifted Forward or
Backward to Bring Gripper Margin to Correct Position



Side View of Miehle Offset Press Showing Electrical Control and Cylinder Adjustment

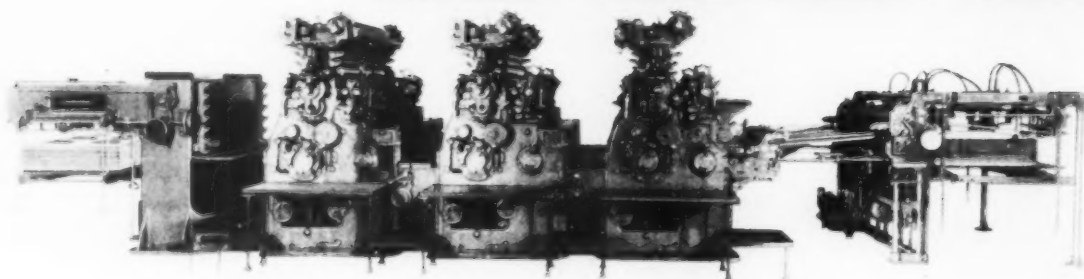


Spring Pressure Register Segment Compensates for all Wear and Back Lead at Transfer Point

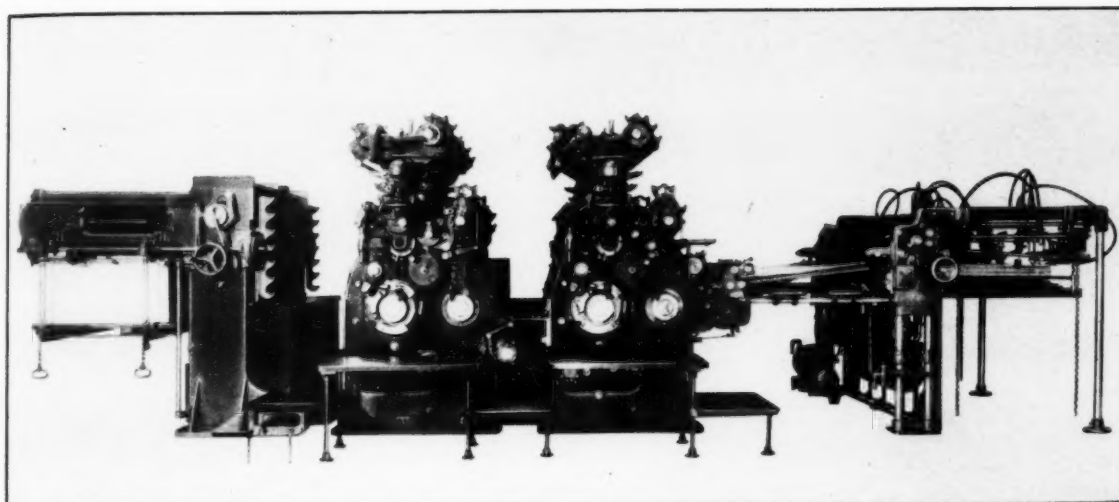


Left... Ink Fountain Closed in Operating Position

Right... Ink Fountain Open for Quick Clean Wash-Up



Miehle Three-Color Offset Press

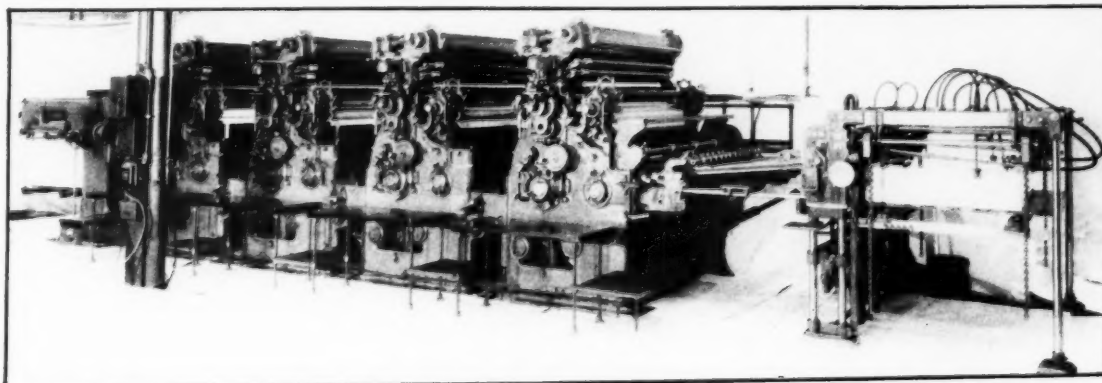


Miehle Two-Color Offset Press

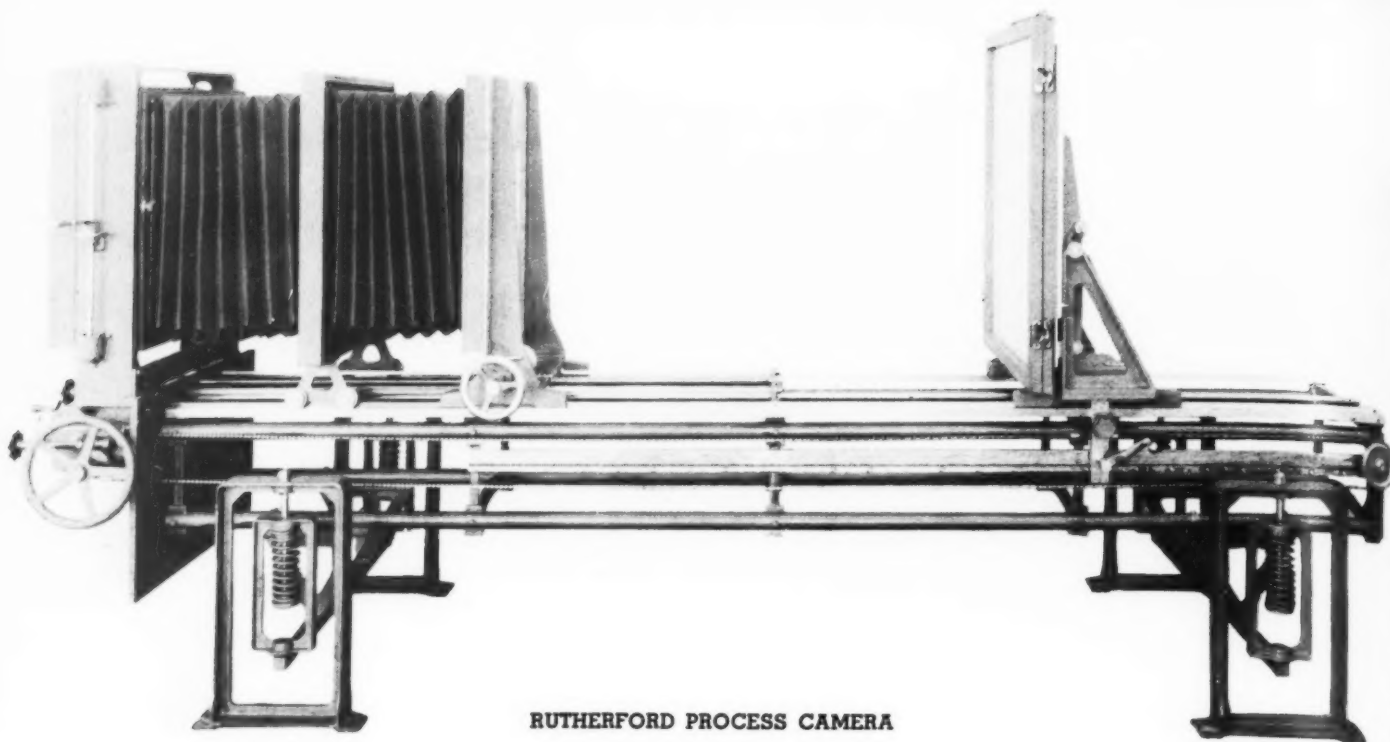
SPECIFICATIONS OF MIEHLE OFFSET PRESSES

Style No.	Maximum Sheet Size	Minimum Sheet Size	Maximum Design	Plate Size	Blanket Size	Distance Between Bearers	Diam. of Cylinder	Speed at Register
69	46½ x 67½	24 x 34	46 x 67	50 x 68-.020	51 x 68-.062	68½"	23"	4100
57	41½ x 55½	19 x 25	41 x 55	45 x 56-.020	47 x 57-.062	57½"	20"	4500
44	29 x 43	16 x 24	28½ x 42	34 x 43½-.018	32½ x 44-.062	44½"	14"	5000

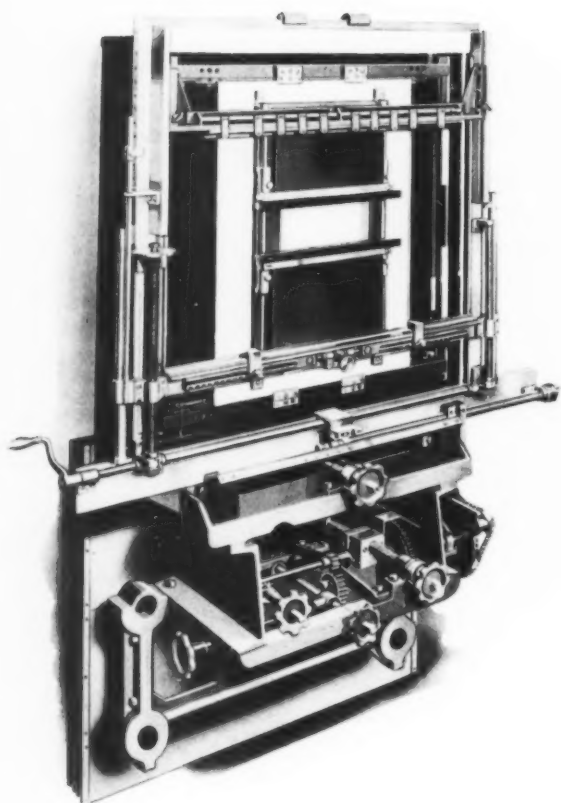
Style No.		H. P.	Approximate Net Weight	Approximate Boxed Weight	Approximate Floor Space	Height	Rev. Fly Wheel	
							Max.	Per Imp.
69	One Color	10	37,925 lbs.	43,640 lbs.	25'4" x 13'5"	8'8"	364	5-7/17
	Two Color	20	65,835 lbs.	75,745 lbs.	31'4" x 13'5"			
	Three Color	30	102,245 lbs.	117,625 lbs.	37'4" x 13'5"			
	Four Color	40	134,470 lbs.	154,690 lbs.	43'4" x 13'5"			
57	One Color	10	31,800 lbs.	36,600 lbs.	22'6" x 12'6"	8'2"	408	4-12/17
	Two Color	20	54,520 lbs.	62,730 lbs.	27'8" x 12'6"			
	Three Color	30	77,225 lbs.	88,850 lbs.	32'10" x 12'6"			
	Four Color	40	100,000 lbs.	115,050 lbs.	38'0" x 12'6"			
44	One Color	7½	20,320 lbs.	23,390 lbs.	16'10" x 10'0"	6'4"	404	4-8/19
	Two Color	7½	32,925 lbs.	37,890 lbs.	20'10" x 10'0"			
	Three Color	10	46,545 lbs.	53,545 lbs.	24'9" x 10'0"			
	Four Color	15	60,245 lbs.	69,315 lbs.	28'9" x 10'0"			



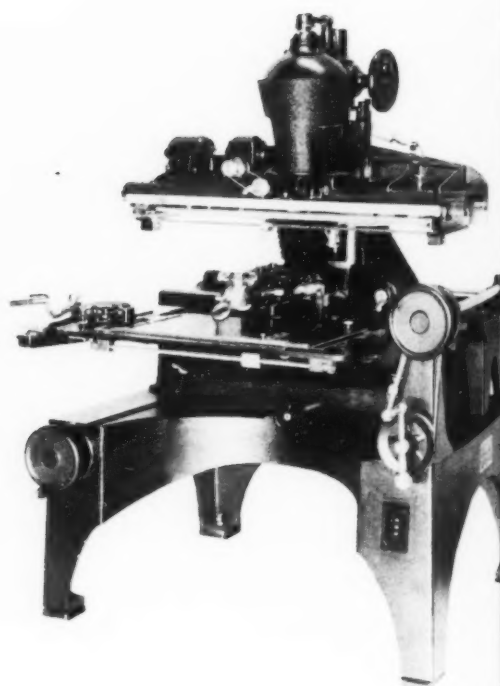
Miehle Four-Color Offset Press



RUTHERFORD PROCESS CAMERA



RUTHERFORD COLOR PRECISION CAMERA



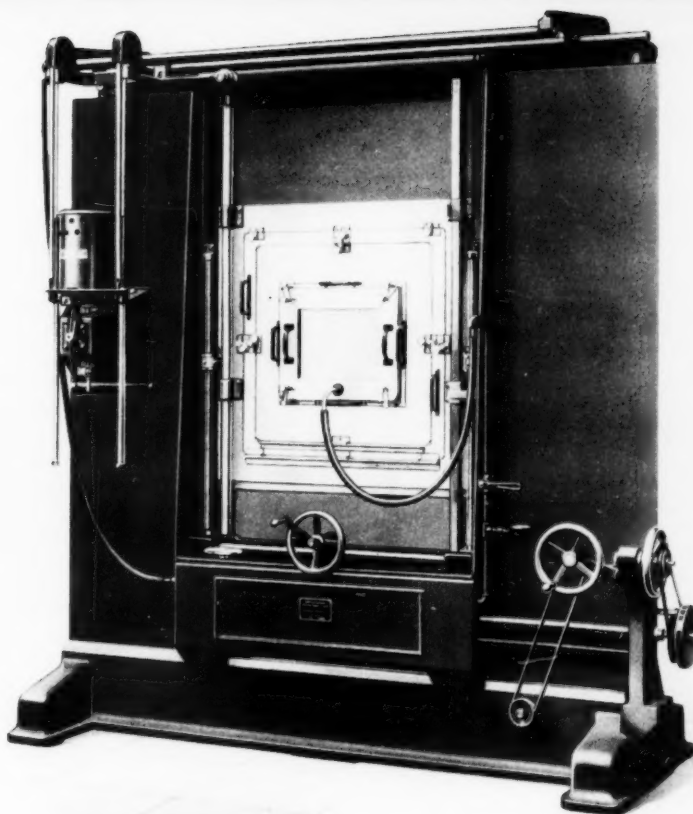
RUTHERFORD PHOTO-LETTERING MACHINE

Equipment of Rutherford Machinery Co.

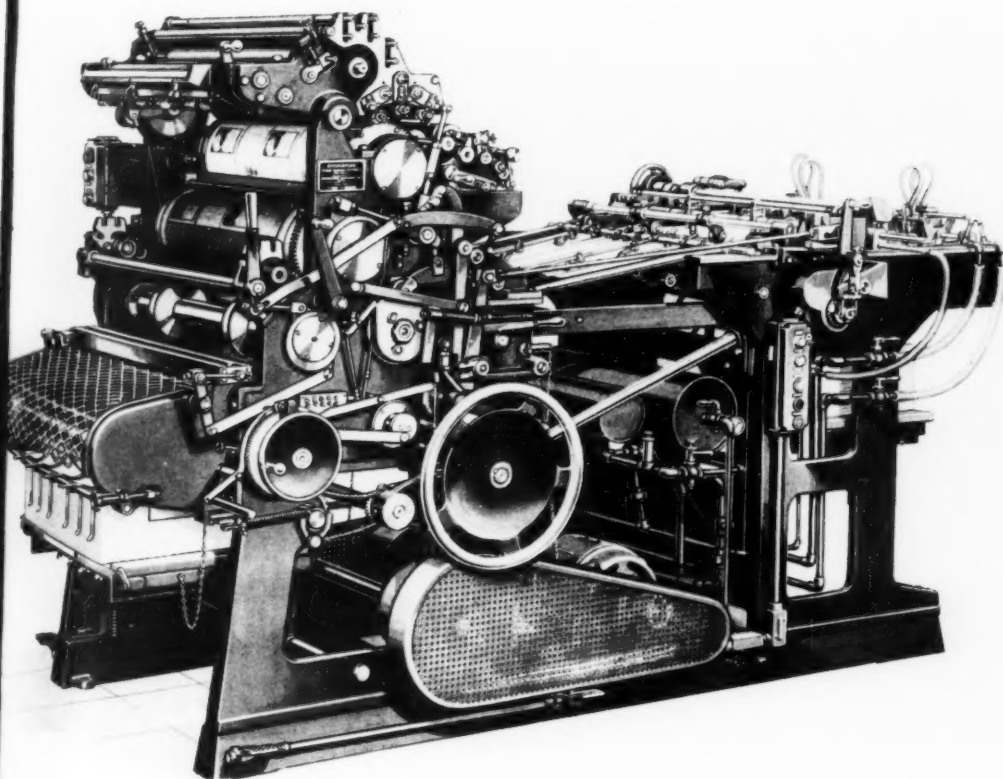
Division of General Printing Ink Corp.



RUTHERFORD VACUUM PRINTING FRAME



RUTHERFORD PHOTO-COMPOSING MACHINE



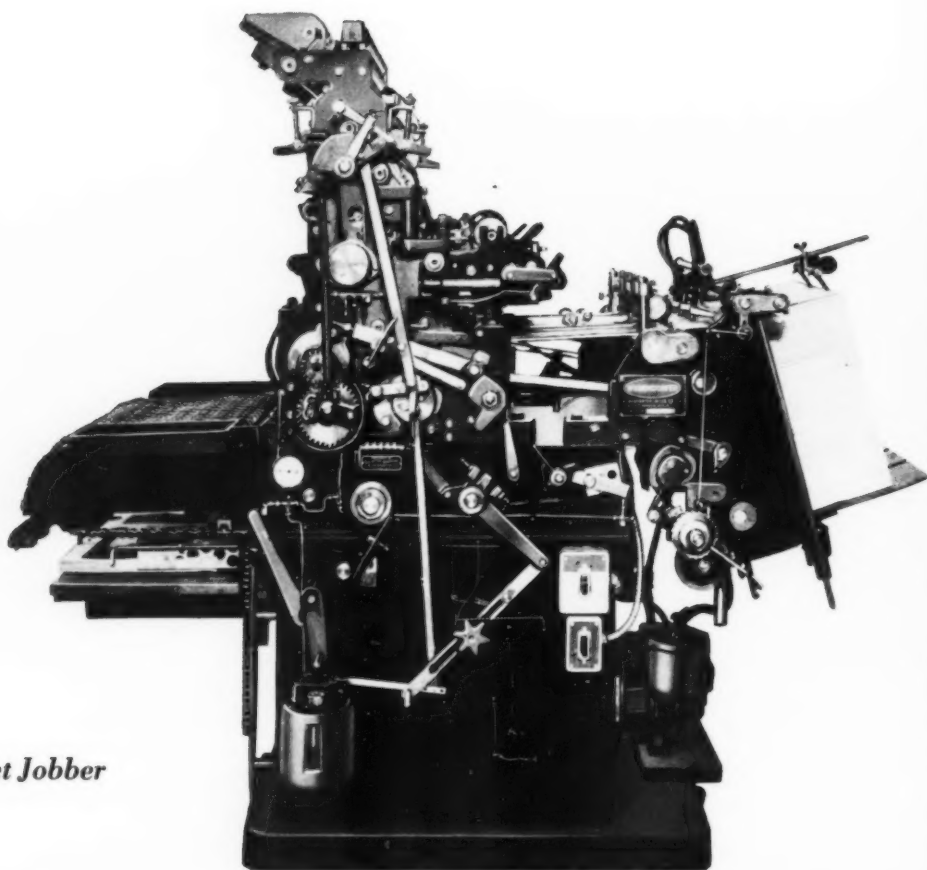
RUTHERFORD
HIGH-SPEED
OFFSET
JOB PRESS
RHS 19x25

Equipment of Rutherford Machinery Co.

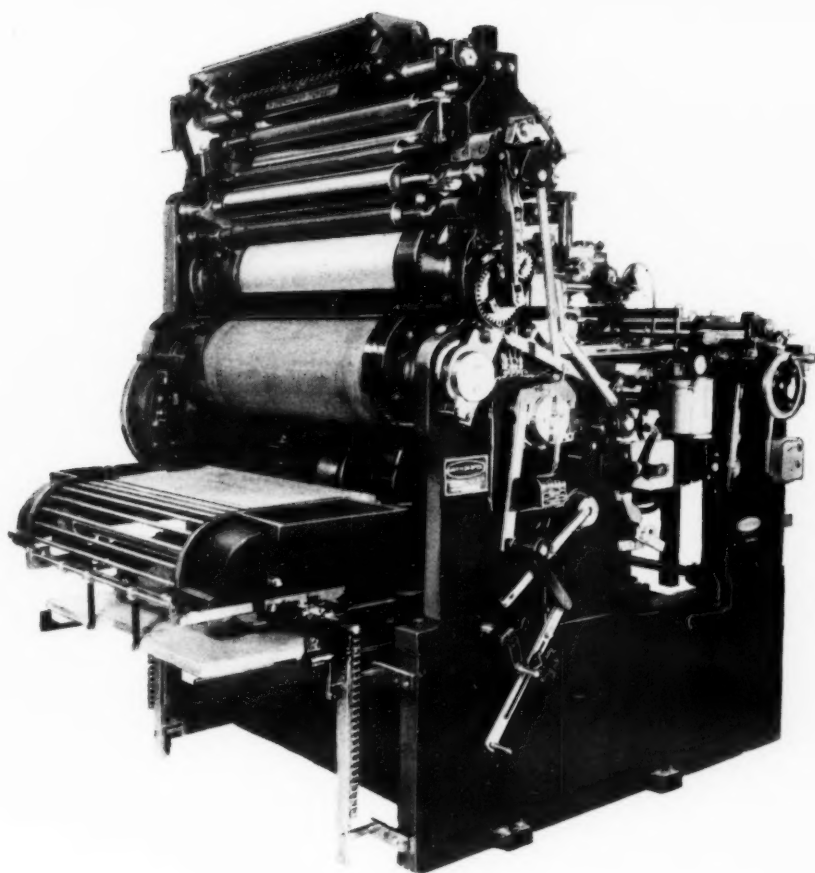
Division of General Printing Ink Corp.



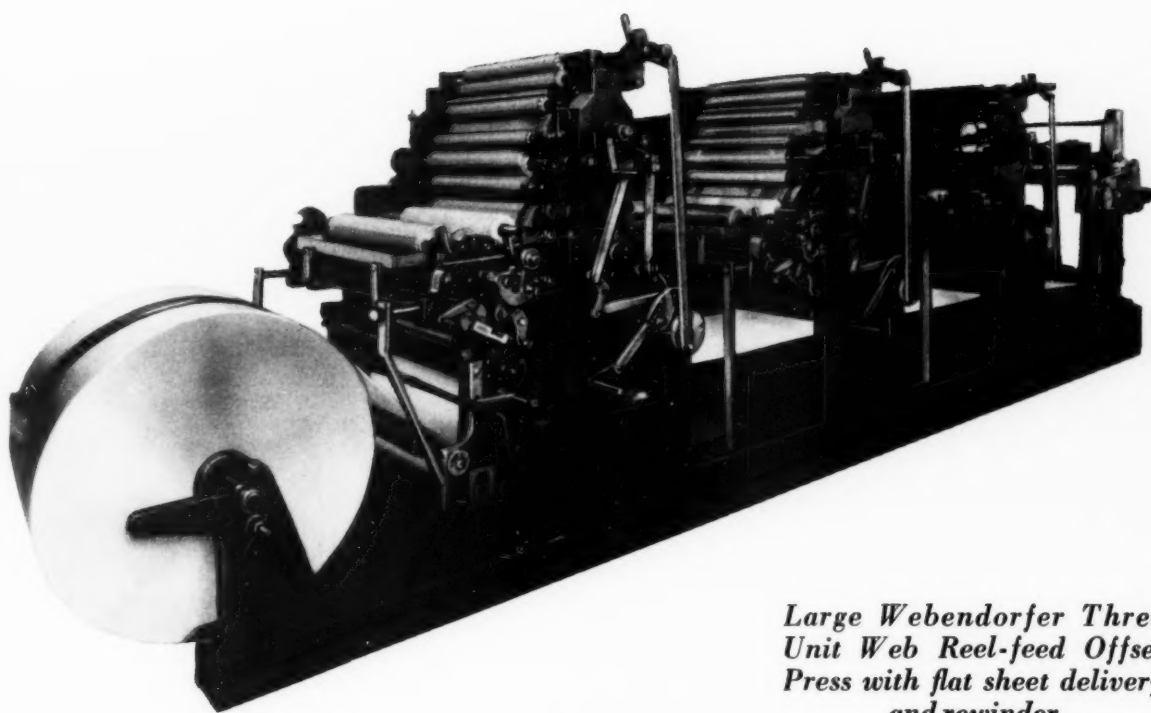
Webendorfer 12" x 18" Offset Jobber



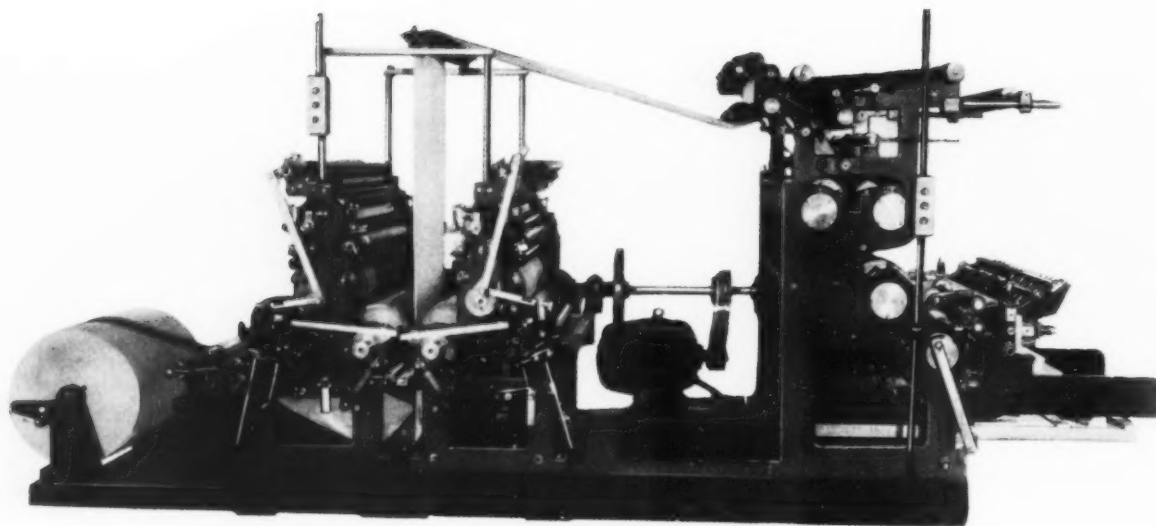
Webendorfer 14" x 20" Offset Jobber



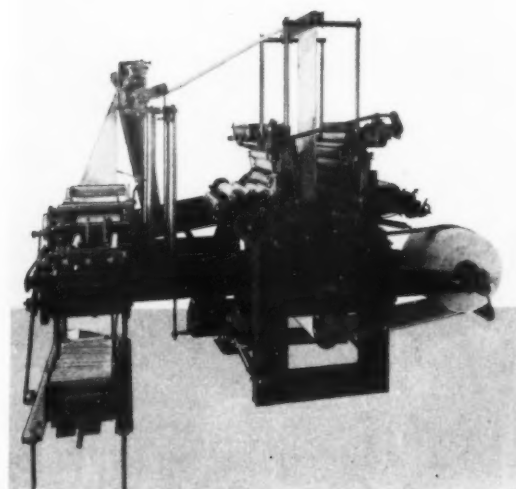
Webendorfer 22"x 26" Offset Press



*Large Webendorfer Three
Unit Web Reel-feed Offset
Press with flat sheet delivery
and rewinder*



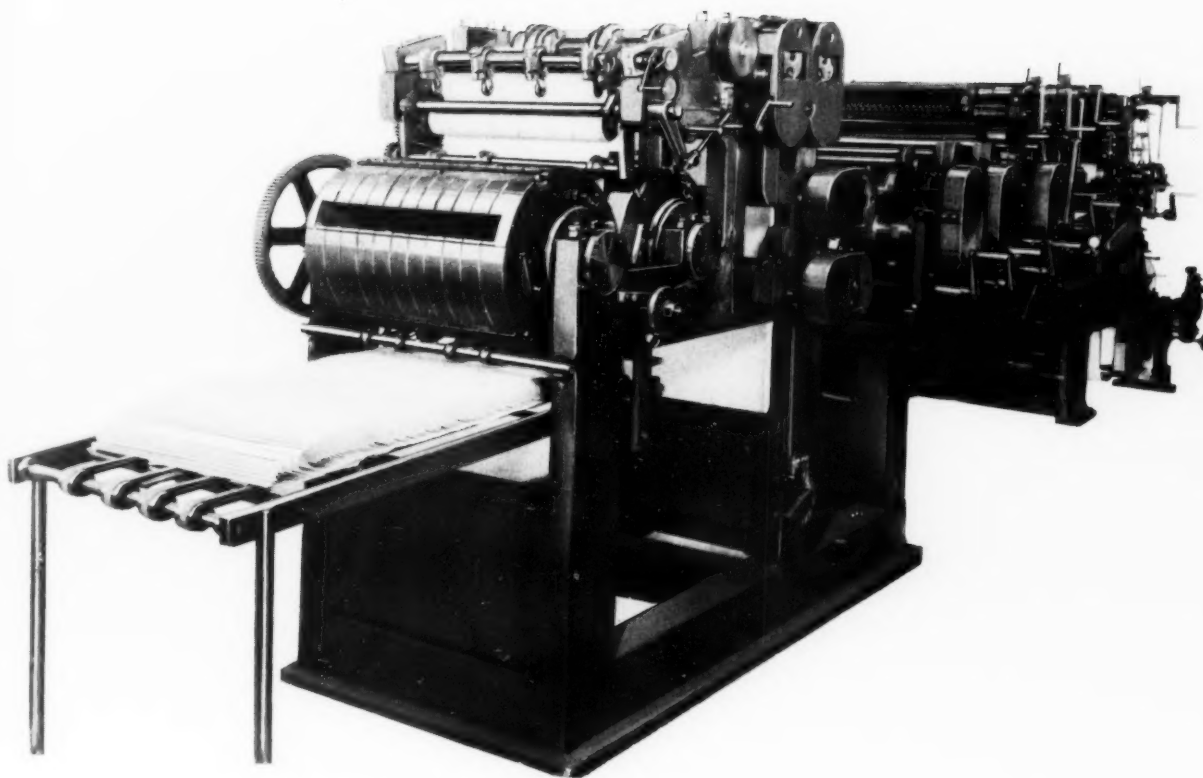
Large Webendorfer 22" x 34" Perfecting Web Unit Reel Feed Offset Press with Magazine folder



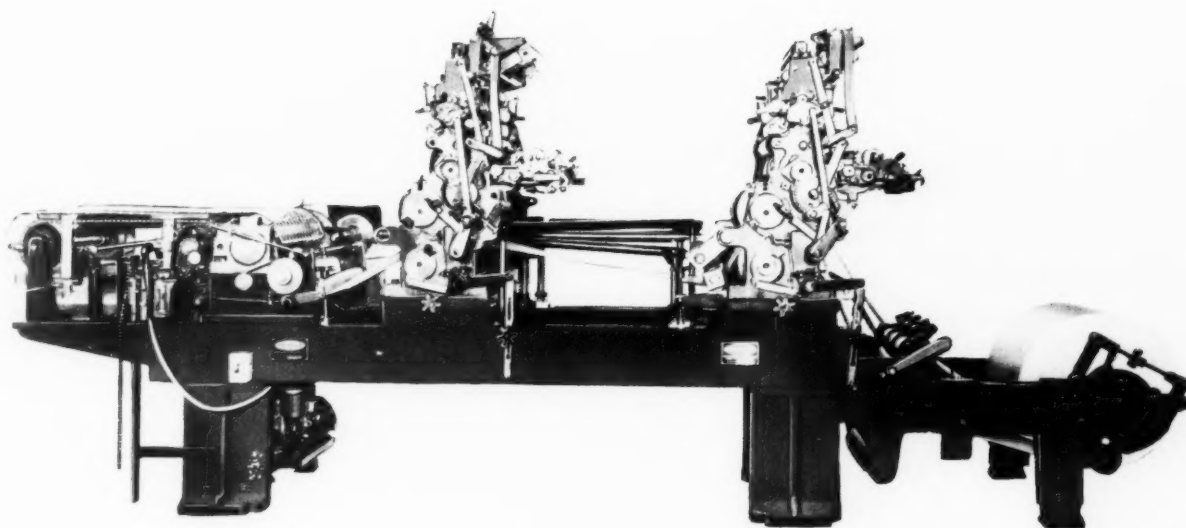
Small Webendorfer Web Unit Reel-feed Perfecting Press with folder



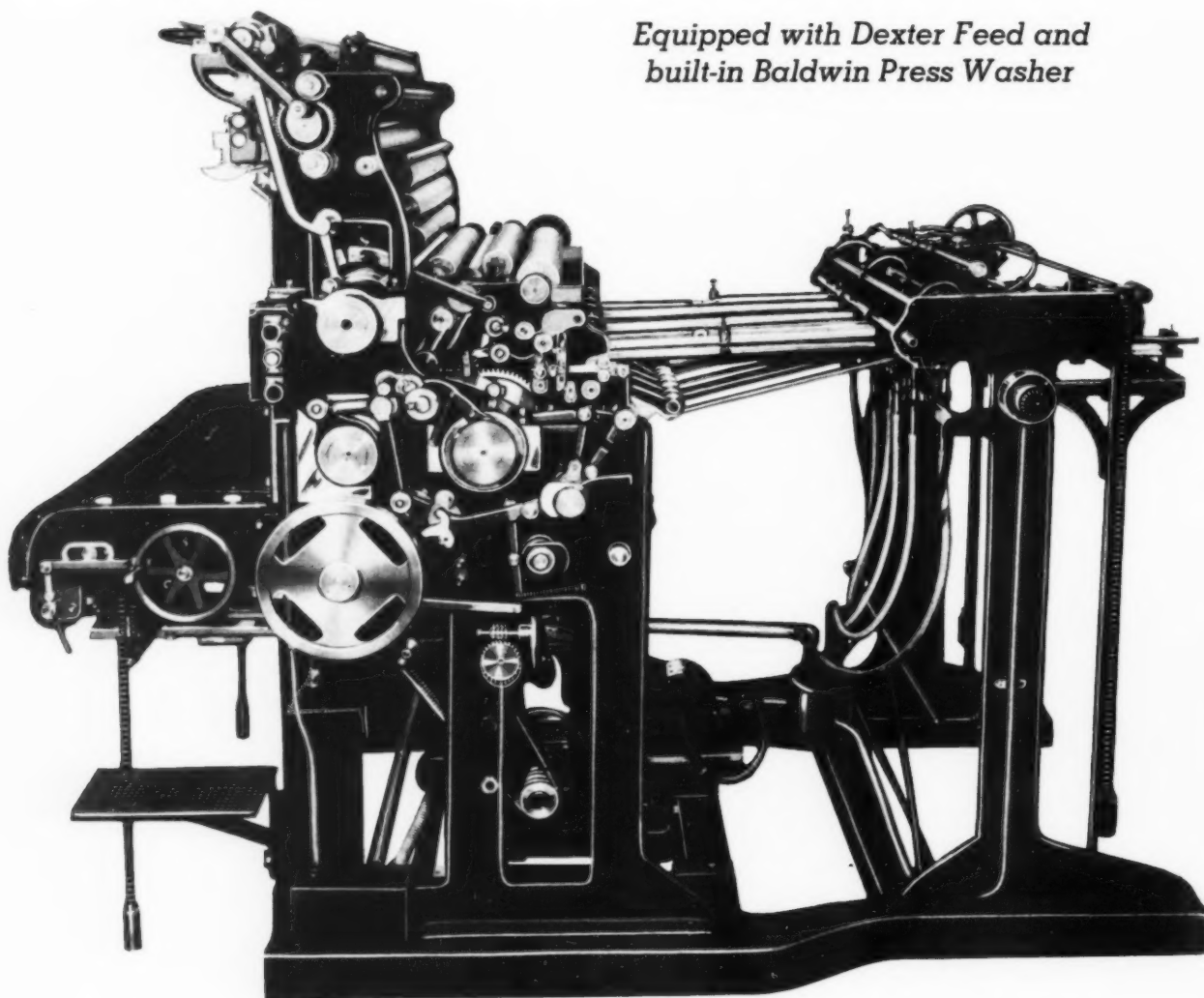
Small Webendorfer Three Unit Web Reel-feed Offset Press with Folder, capable of producing pamphlets, 24,000 sheets per hour three colors, one side or two on one and one on other side.



Webendorfer Offset Manifold Reel Feed Press



Webendorfer Reel-Feed Offset Press 17"x 22", 2 units with cutter head and flat sheet delivery.



*Equipped with Dexter Feed and
built-in Baldwin Press Washer*

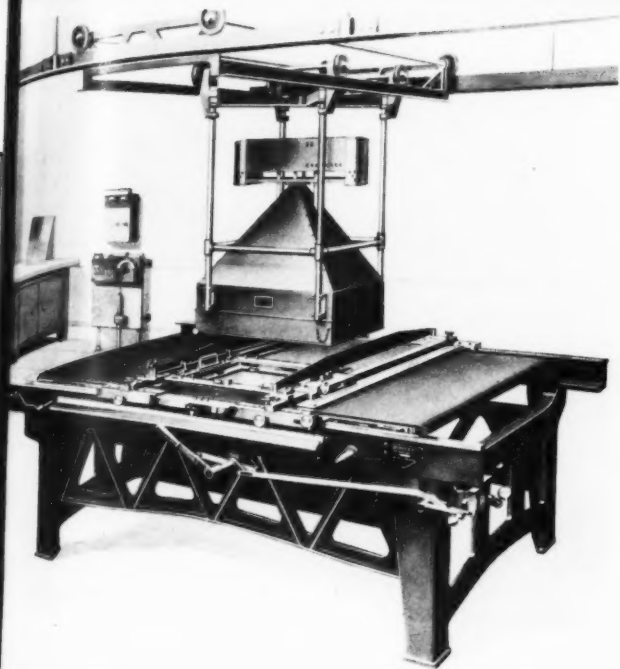
**THE
WILLARD OFFSET PRESS
22" x 30"**

WILLARD MANUFACTURING CORPORATION

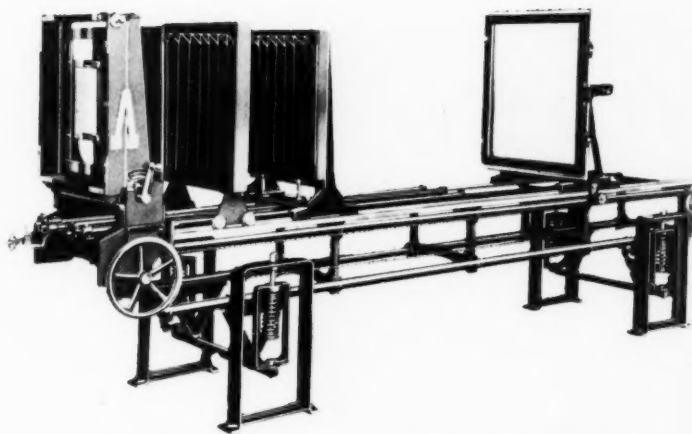
Executive Offices

28 WEST 23rd STREET

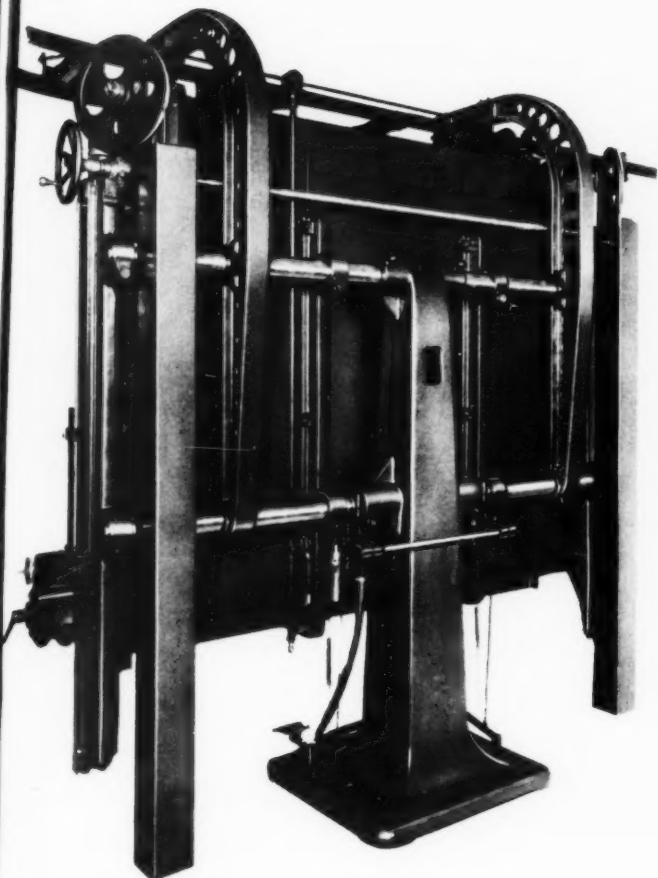
NEW YORK



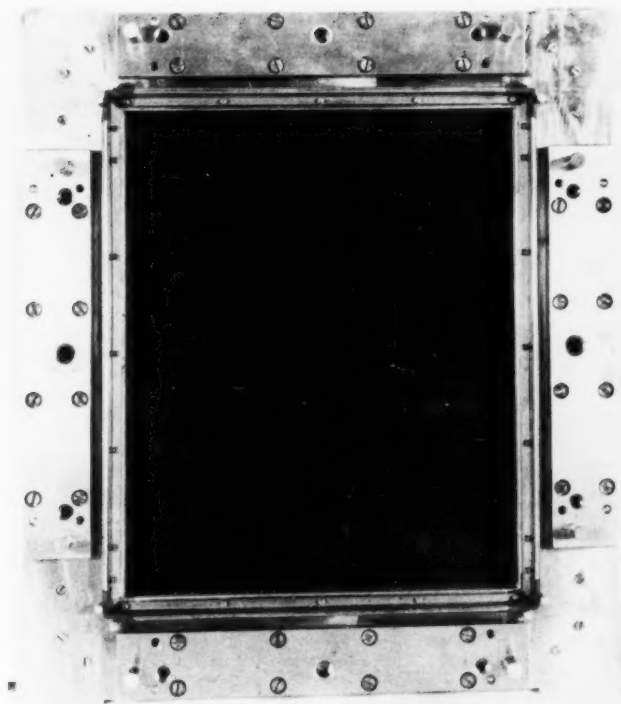
Monotype-Directoplate Simplex Photo Composing Machine



Monotype-Directoplate Typographic Camera, Dark Room Type

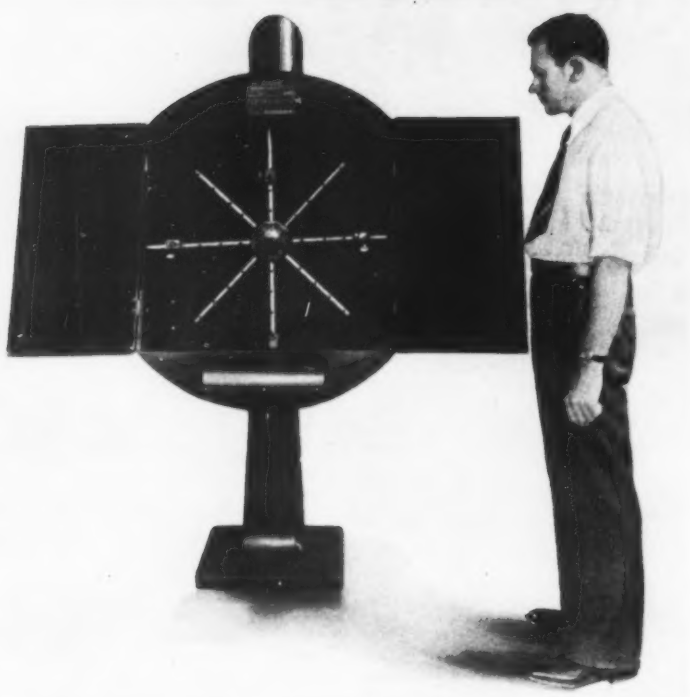


Monotype-Huebner Vertical Photo-Composing Machine
—Back View Showing All-Metal Construction

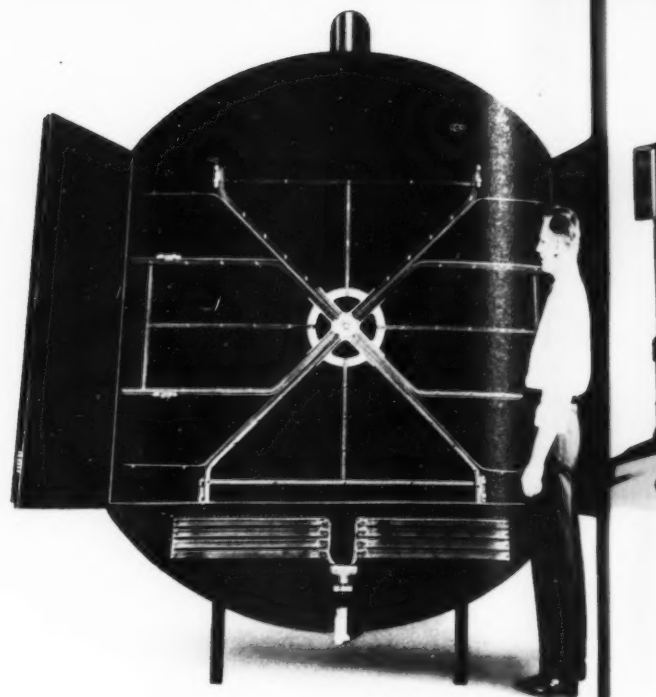


Monotype-Huebner Non-Embossing Negative Holder—
Front View

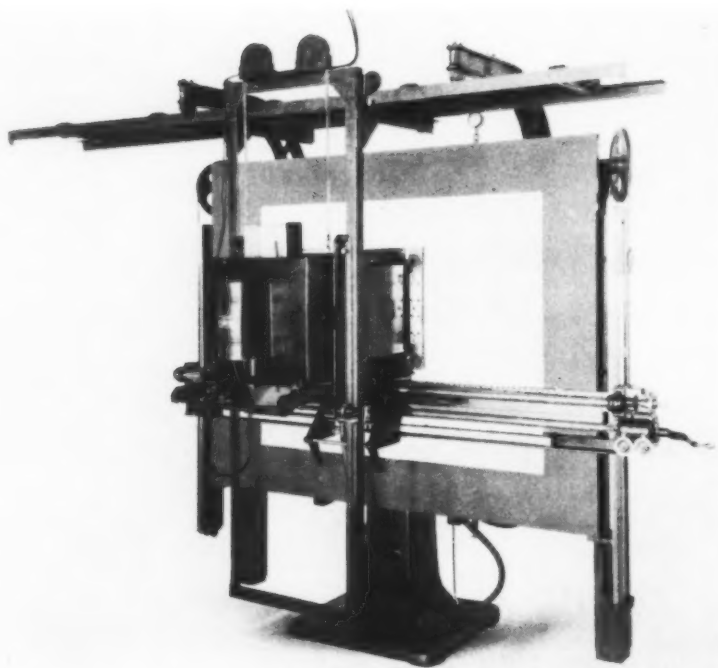
Equipment of Lanston Monotype Machine Co.



**Monotype-Huebner Vertical Plate-Coating Machine
Junior Model—Casing Open, Heating Units Covered**



Monotype-Huebner Vertical Plate-Coating Machine, Standard Model—92-inch Casing Open, Heating Units Exposed

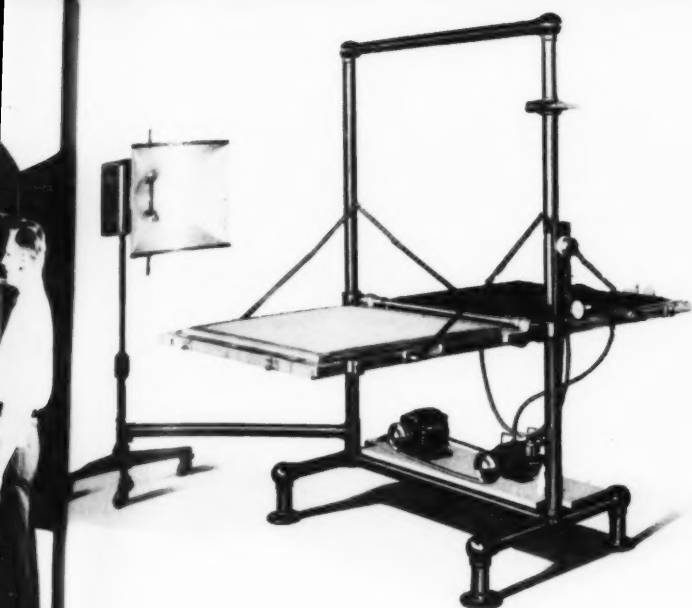


**Monotype-Huebner Vertical Photo Composing Machine
—Front View in Exposure Position**



Monotype-Huebner Universal Registering Device

Equipment of Lanston Monotype Machine Co.



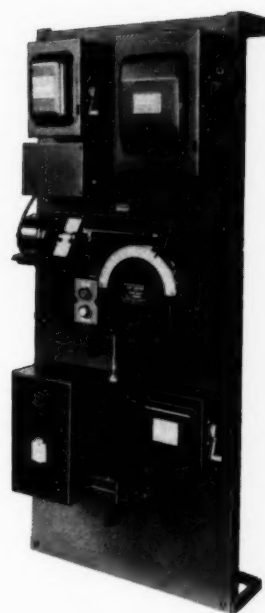
**M-H All-Metal
Registering Vacuum
Frame**



**M-H Register Chase Over Which a Sheet
of Acetate Film Has Been Stretched**

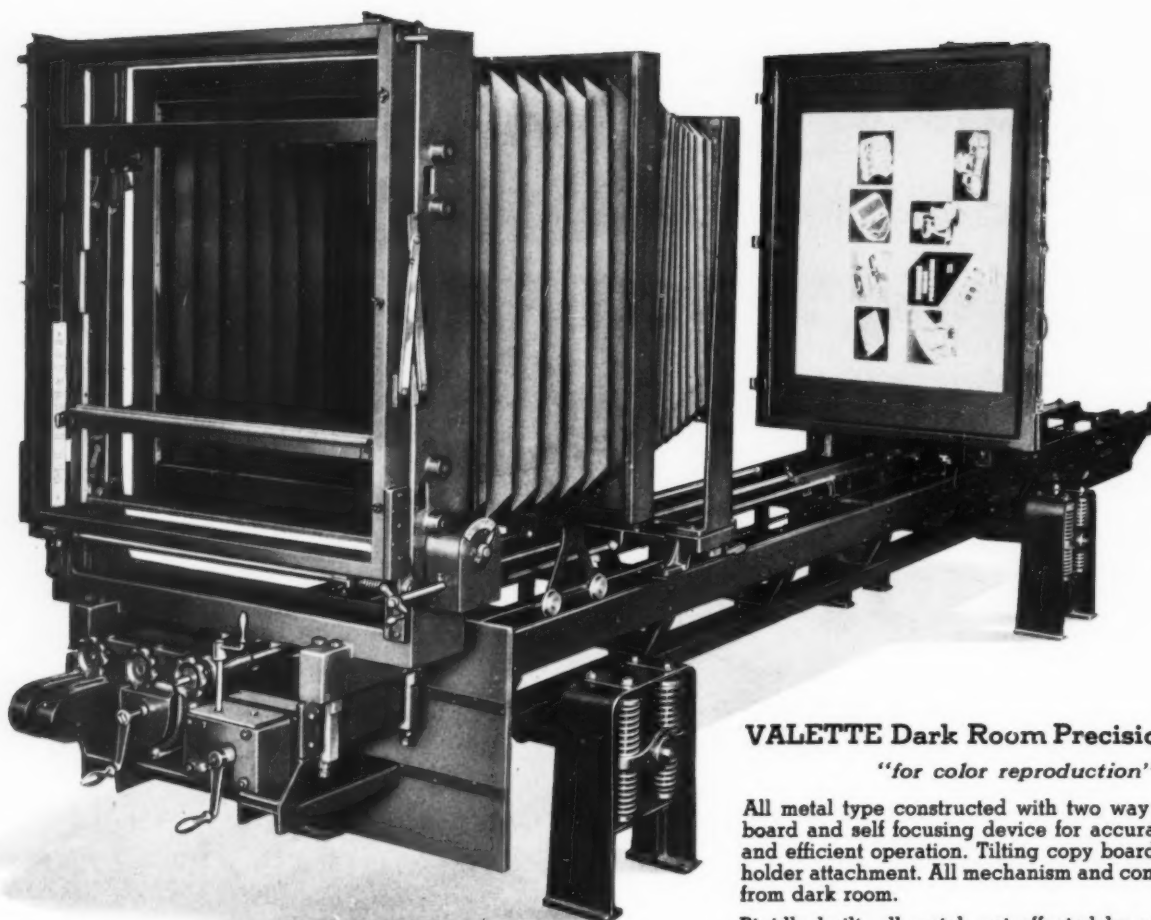


**M-H Adjustable
Layout and
Register Table**



Monotype-Directoplate Light-Timing Device

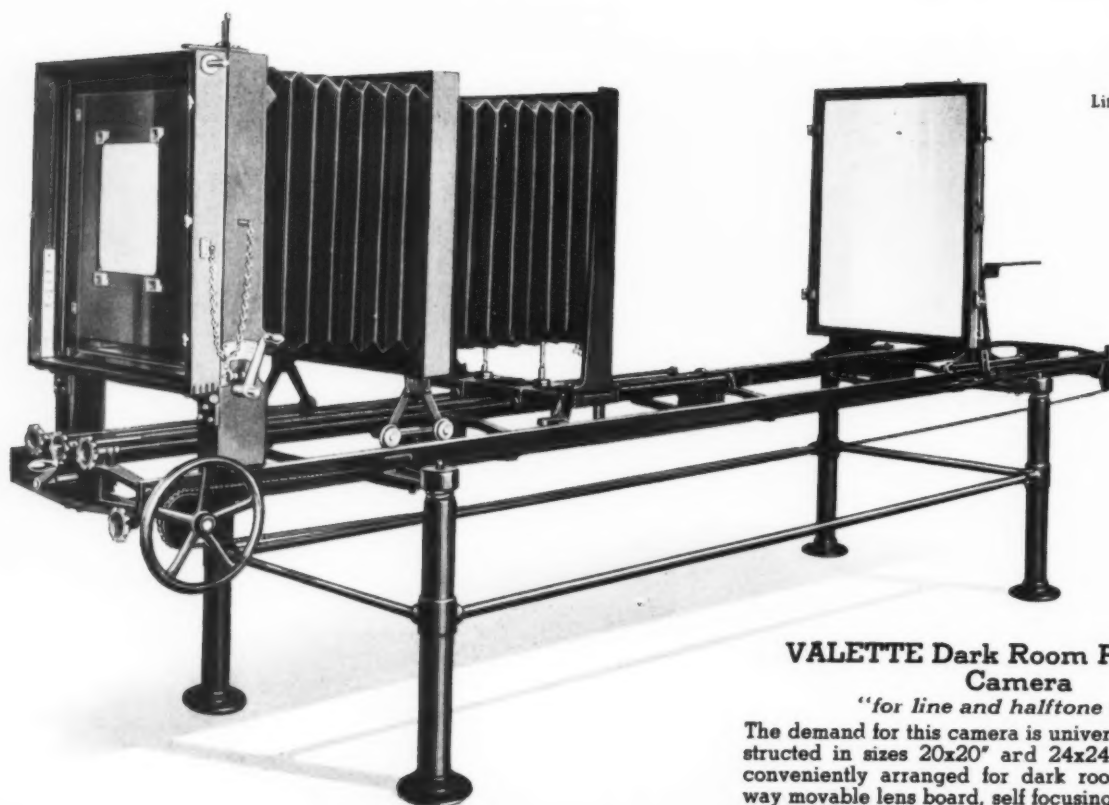
Equipment of Lanston Monotype Machine Co.



VALETTE Dark Room Precision Camera
"for color reproduction"

All metal type constructed with two way movable lens board and self focusing device for accurate adjustment and efficient operation. Tilting copy board with positive holder attachment. All mechanism and controls operated from dark room.

Rigidly built, all metal, not effected by weather conditions assuring constant alignment. Made in all sizes.



VALETTE Dark Room Planograph Camera
"for line and halftone work"

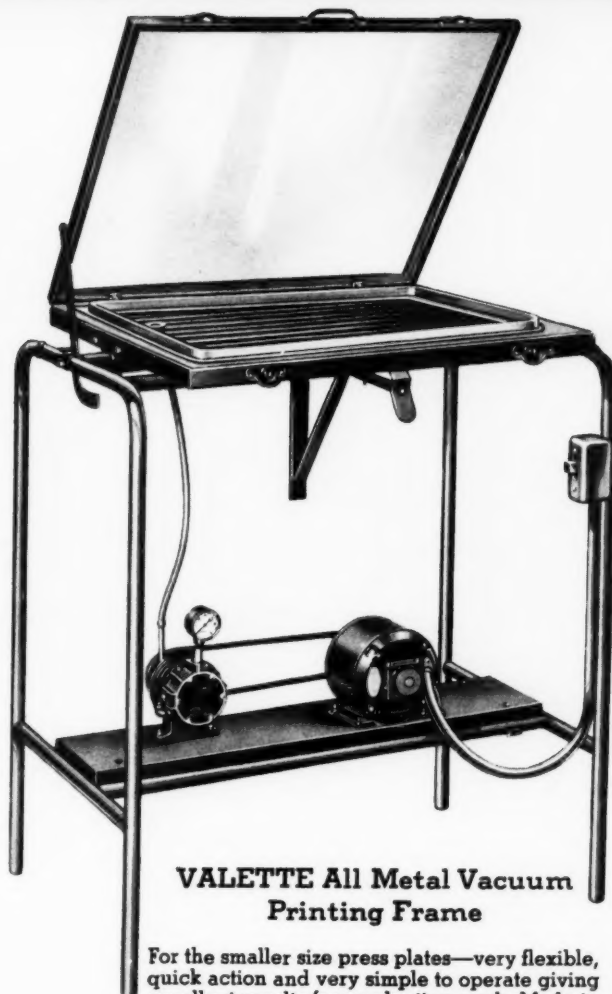
The demand for this camera is universal—all metal constructed in sizes 20x20" and 24x24". All mechanism conveniently arranged for dark room operation. Two way movable lens board, self focusing device and tilting glass front copy board. Equipped with or without screen holder; positive holder or stay flat holder for film negatives. Color work can be done on this camera.

Made by
 Litho Equipment and Supply Co
 212 North Sheldon Street
 Chicago, Illinois



VALETTE
Plate Coating Whirler

Very durable, rigid construction with a rotating action that gives each plate a uniform coating for the best results. All sizes; with and without automatic water sprayer; with speed and heat regulation.



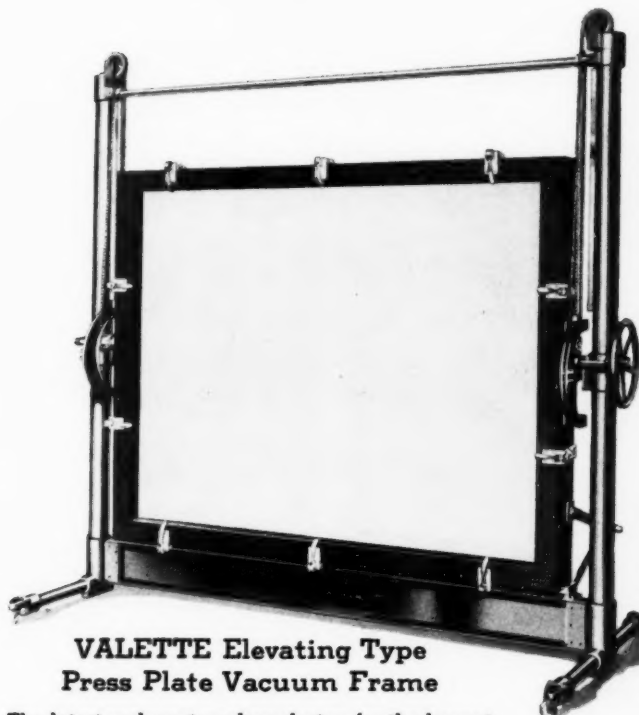
VALETTE All Metal Vacuum
Printing Frame

For the smaller size press plates—very flexible, quick action and very simple to operate giving excellent results for production work. Made in many sizes.



VALETTE (Large) Press Plate
Vacuum Printing Frame

Very sturdy constructed to meet the requirements for large press plates. Clamps assure complete vacuum. Movable to any plant location. Made in sizes up to 38½ x 50 inches.

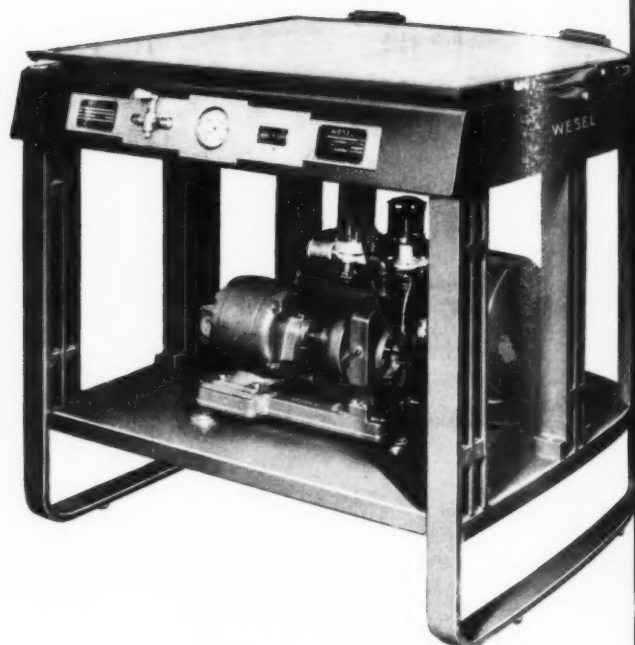


VALETTE Elevating Type
Press Plate Vacuum Frame

The latest and most modern design for the largest size press plates. Adjustable for positioning work without any lost motion. Automatic vacuum control for constant vacuum. Counter balanced and easy to operate. Made in sizes up to 80x120 inches.



**EASTMAN TRANSMISSION AND REFLECTION
DENSITOMETER, MODEL B**



**Wesel Patented Horizontal Vacuum Printing Machine
(closed view)**



EASTMAN VIEWING LIGHT BOX



Wesel Plate-Coating Machine

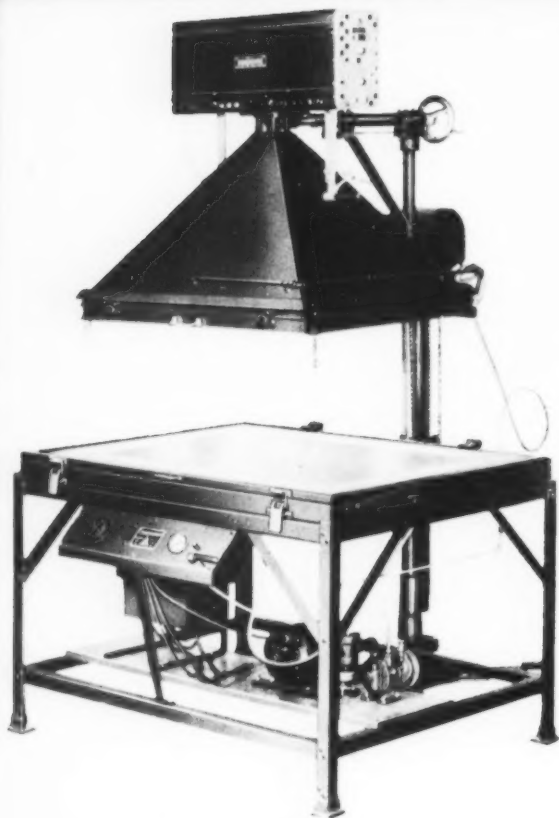


Wesel Patented Horizontal Vacuum Printing Machine
(open view)

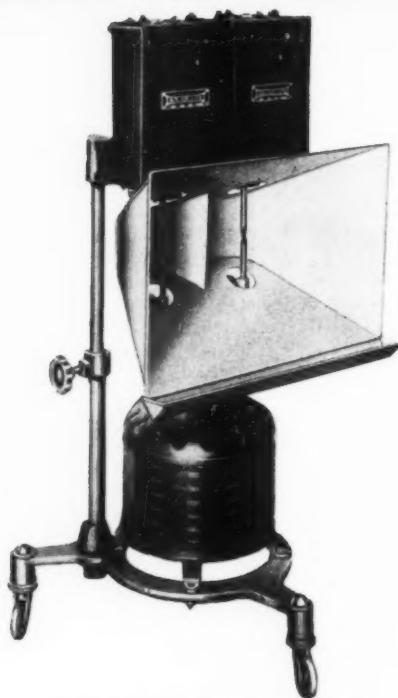


Wesel Patented Horizontal Vacuum Printing Machine
(closed view)

Equipment of Wesel Mfg. Co.



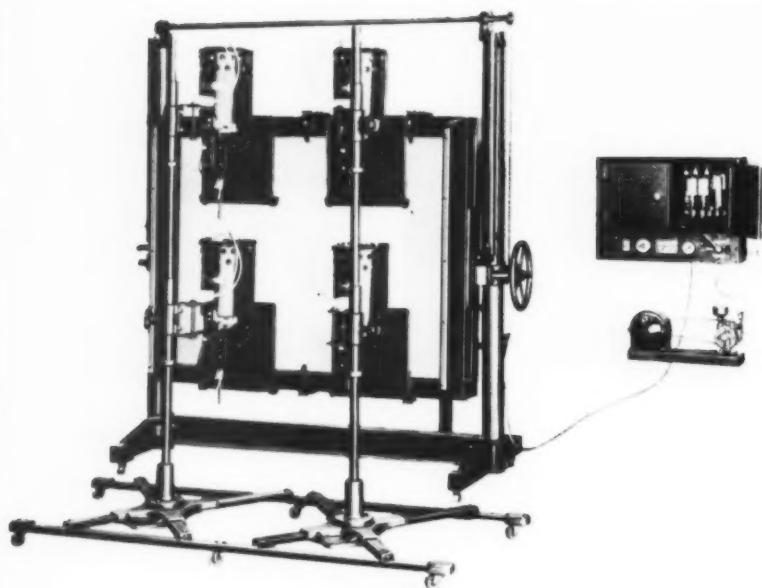
HORIZONTAL COMPOSING UNIT
Type HCU



SOLAR-LITE TWIN ARC PRINTER
Type SRK



SOLAR-LITE CAMERA LAMP
Type SRK



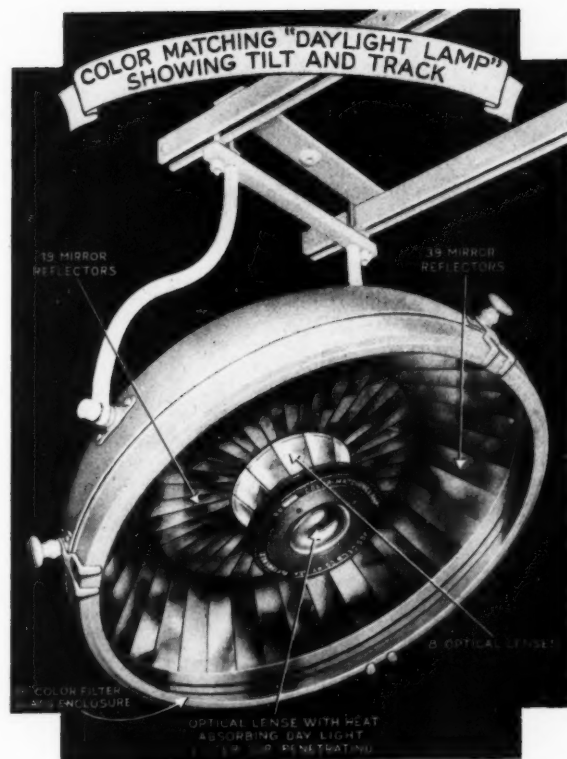
SOLAR-LITE DOUBLE DECK PRINTER
Type SRK-DM

with Type ACW Composing Unit
and Automatic Control



SOLAR-LITE PRINTING LAMP
Meiers type MTL

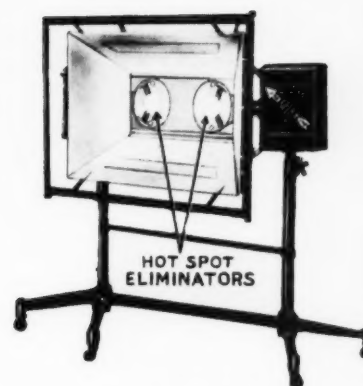
Atlas Electrical Devices Co.



COLOR MATCHING LAMP
by GELB



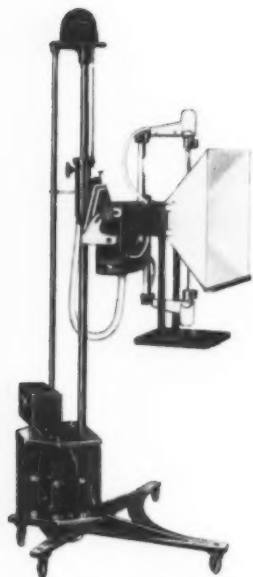
Model C124 DA



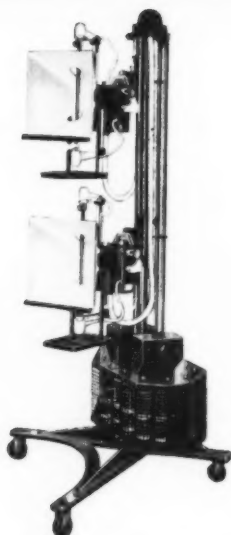
Model SF 116
Reflector 25x46

Model C-125TDD
Reflector 15½"x16"

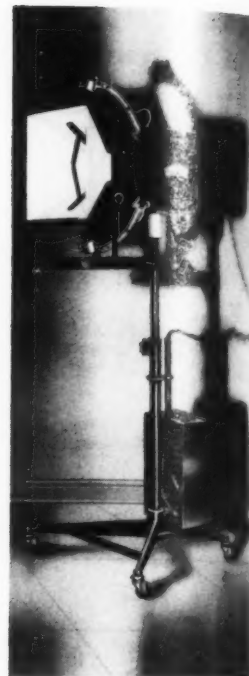
Equipment of the Gelb Lamp Mfg.



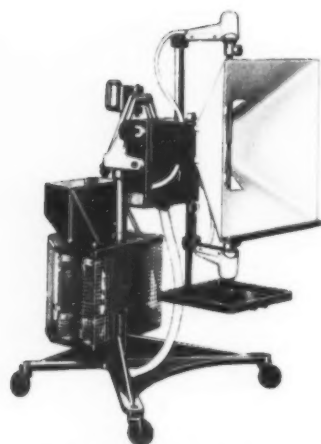
TWO SPEED SPRING BALANCE
45-90 ampere type



HELIO DOUBLE DECK
45-90 ampere type



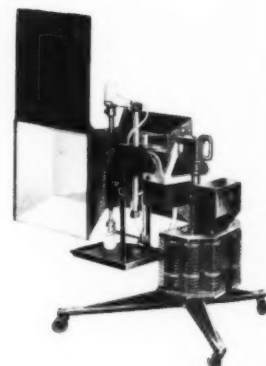
ONE SPEED TELESCOPING
35 ampere speed



TWO SPEED TELESCOPING
45-90 ampere type

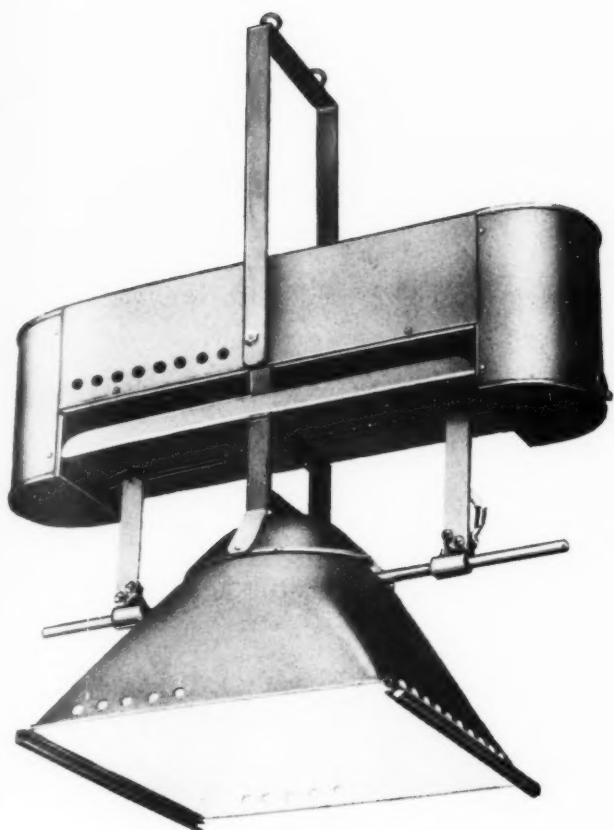


TWO SPEED TWIN ARC
45-90 ampere type

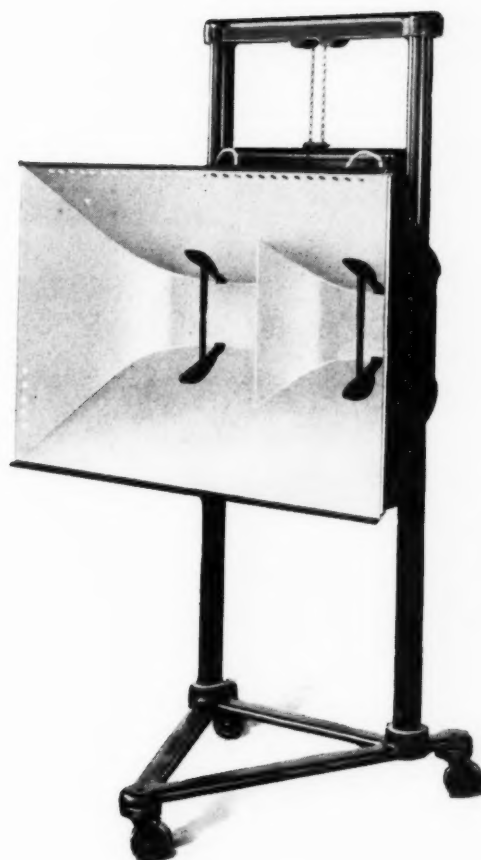


TWO SPEED DOUBLE REFLECTOR
45-90 ampere type

Equipment of the C. F. Pease Company

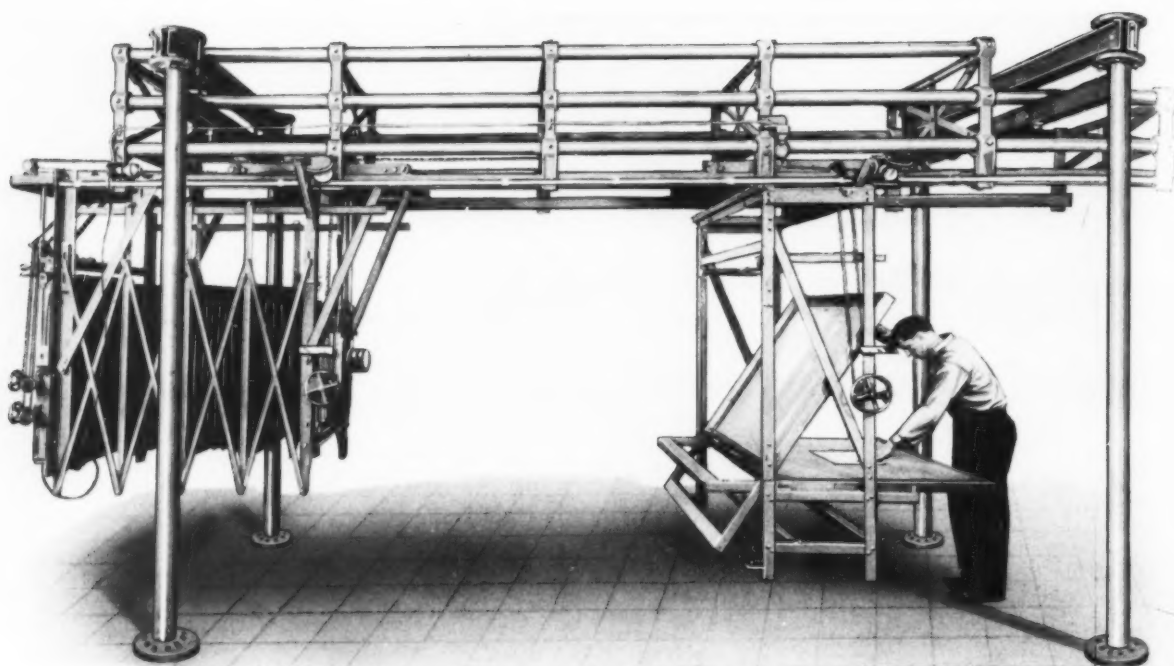


MACBETH TYPE HD LAMP
Especially designed to throw the light
downward for horizontal printing.

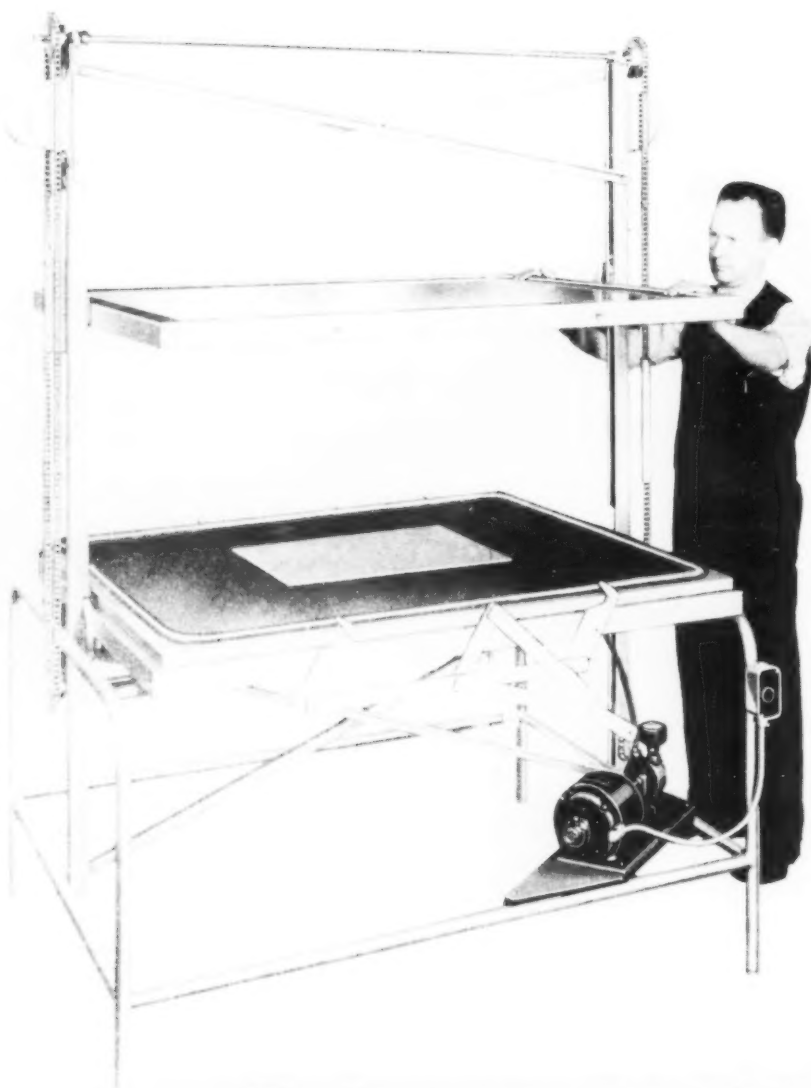


NEW MACBETH PRINTING LAMP
Type B16, Mounted on
Counterbalancing Stand.

Equipment of The Macbeth Arc Lamp Co., Inc.

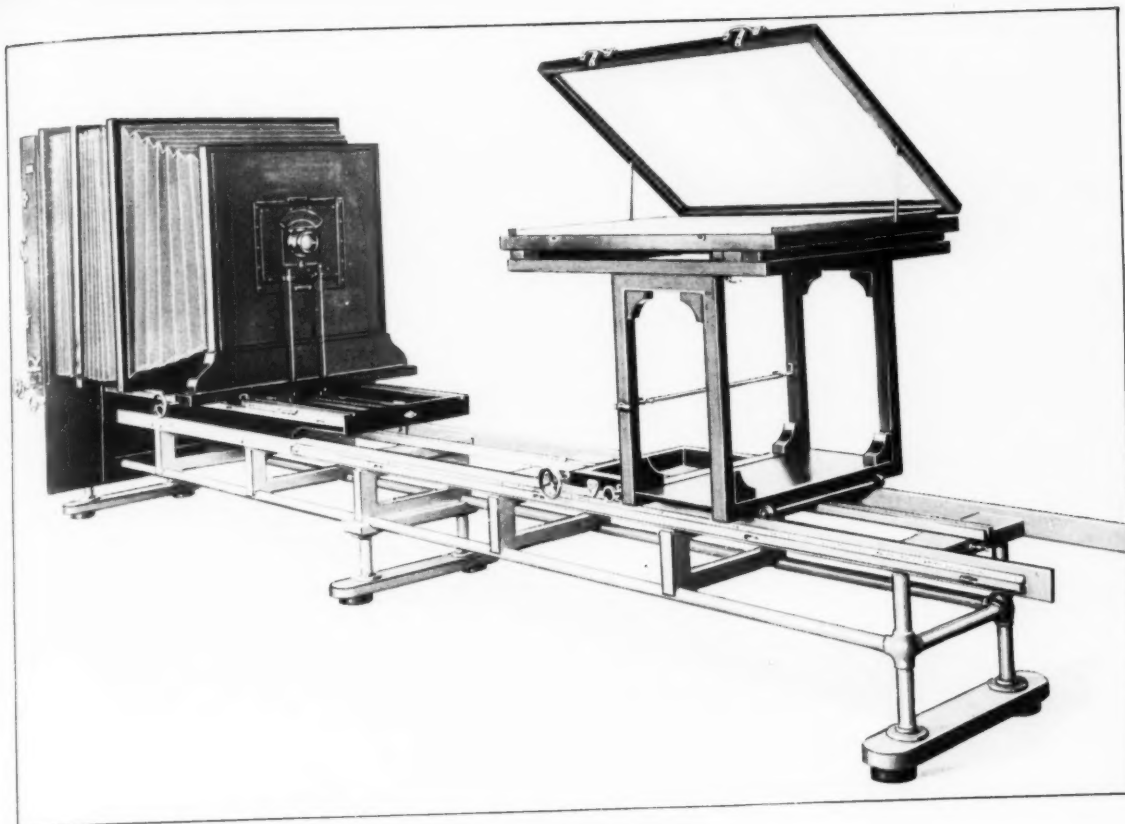


**OVERHEAD
CAMERA**

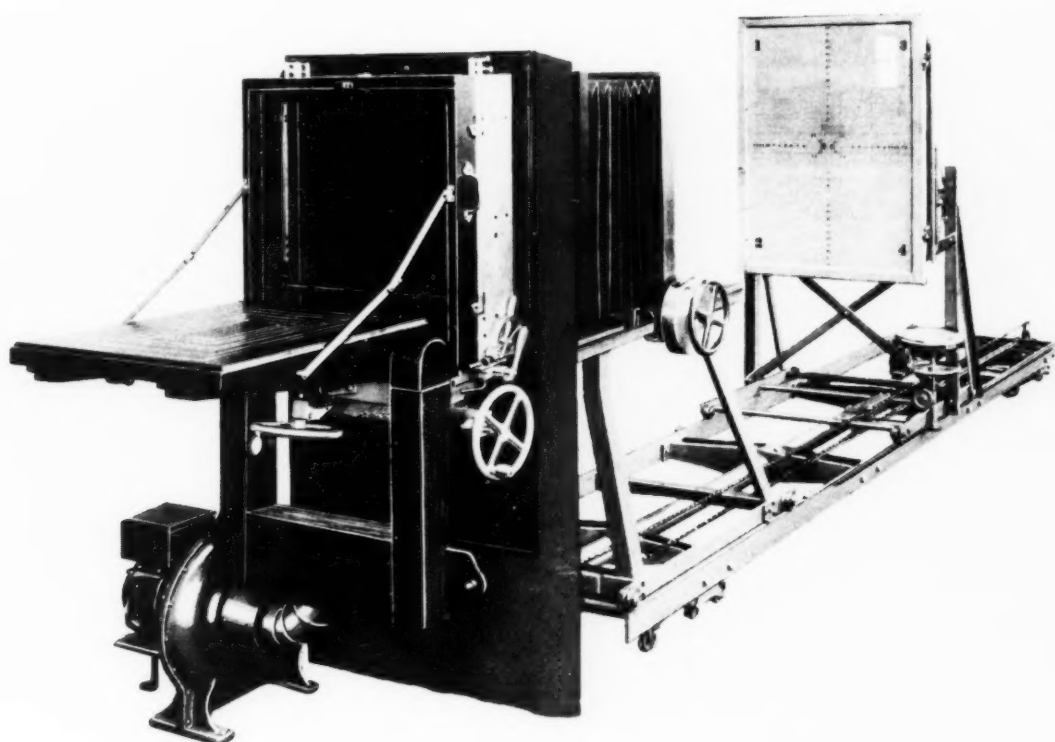


**VACUUM FRAME
TYPE "U"**

Equipment of R. R. Robertson



DARKROOM CAMERA



**FULLY EQUIPPED CAMERA WITH VACUUM
FILM HOLDER**

Equipment of R. R. Robertson

PLATE
WHIRLER

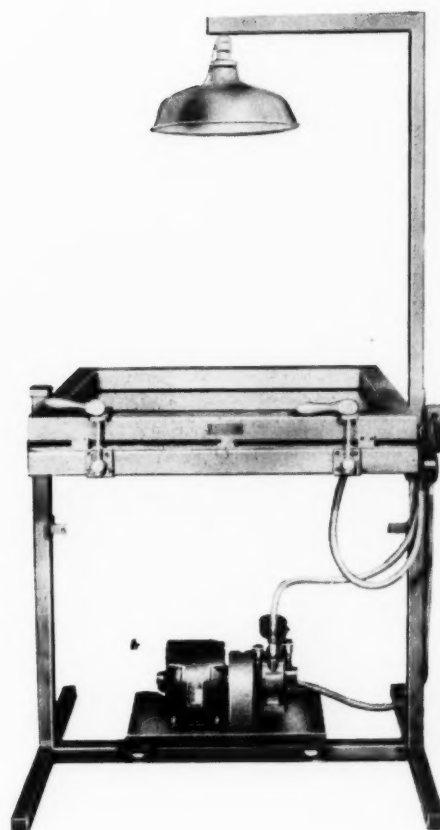


VACUUM FRAME

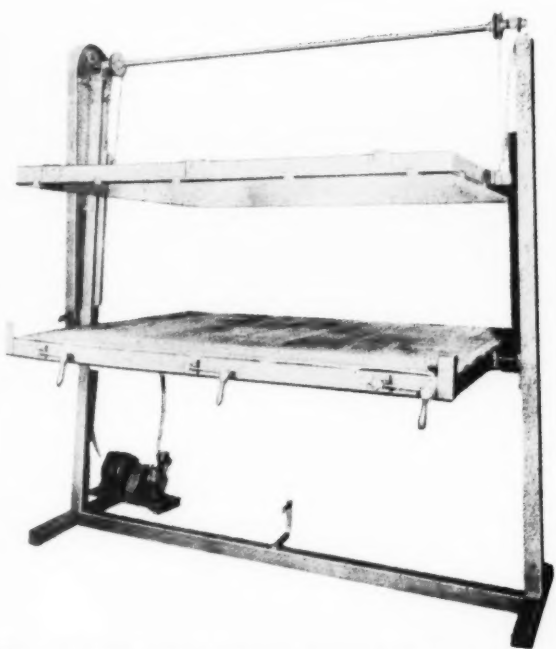
Equipment of R. R. Robertson



Miles Horizontal air purifier Whirler for coating plates. Made in all popular sizes.



Miles combination vacuum printing frame for use inside and outside dark room. 22 x 28.



The new Miles glass raising vacuum printing frame in all popular sizes.



Miles all-metal layout table with double diffusing glass. Made in all popular sizes.

Equipment of Miles Machinery Company

Special Issues—The Photo-Lithographer

The May and September issues of THE PHOTO-LITHOGRAPHER are Equipment Review and Convention issues. These issues will picture in full halftone pages equipment offered for sale to the industry.

The Equipment Review and Convention issues will tie in with Graphic Arts Conventions. Distribution will be not less than six thousand copies.

Manufacturers of equipment used in the lithographic industry may contribute photographs of their equipment for the Equipment Review issues. The material will be shown with one or two line captions as editorial matter. Space requirements and copy are subject to the approval of the publisher.

How to Step Up Equipment Sales . . .

✓ THE PHOTO-LITHOGRAPHER has the decided advantage of being turned out by the lithographic process as distinguished from the letterpress process. A publication turned out by the lithographic process, the process used by those who receive the publication, enjoys a greater consumer acceptance than does one produced by a competing process.

✓ THE PHOTO-LITHOGRAPHER was set up as an educational publicity medium to be distributed to the members of the National Association of Photo-Lithographers without subscription charge in October, 1933. The first issue, a four-page 8½ x 11 folder, was distributed to approximately one hundred establishments. Because of the vital editorial content of THE PHOTO-LITHOGRAPHER, demand for the publication increased to an extent where it was necessary to put a subscription price on it. Finally, it was found necessary to accept advertising at very low rates to help pay costs. The publication has increased from a four-page folder to the present September, 1936, issue.

✓ Color advertising, bleed borders and other sales attention getting formats can be utilized in THE PHOTO-LITHOGRAPHER. It is the policy of THE PHOTO-LITHOGRAPHER to utilize as many different kinds of paper as possible, this to increase the use of various kinds of papers by lithographers.

✓ Because of the Wire-O binding utilized in THE PHOTO-LITHOGRAPHER, an advertiser can prepare his own insert. The publication is delivered in large centers by Western Union Telegraph boys and by parcel post in sparsely settled communities, and therefore not subject to the rigid regulations laid down for publications enjoying Second Class Entry. Advertisers can utilize space in THE PHOTO-LITHOGRAPHER to:

Carry an insert on any kind of paper printed or lithographed as desired.
Carry a swatched sheet, an odd size, a novel fold, a die cut piece; or, in fact, almost anything which can be wire-bound.

Carry a sample of cloth, board or even zinc to those who are in the market.

Several advertisers have given us evidence of exceptional results obtained from advertising carried in THE PHOTO-LITHOGRAPHER. One advertiser, name submitted on request, having developed a new product, built up an entirely new line of profitable business as a result of advertising carried exclusively in THE PHOTO-LITHOGRAPHER.

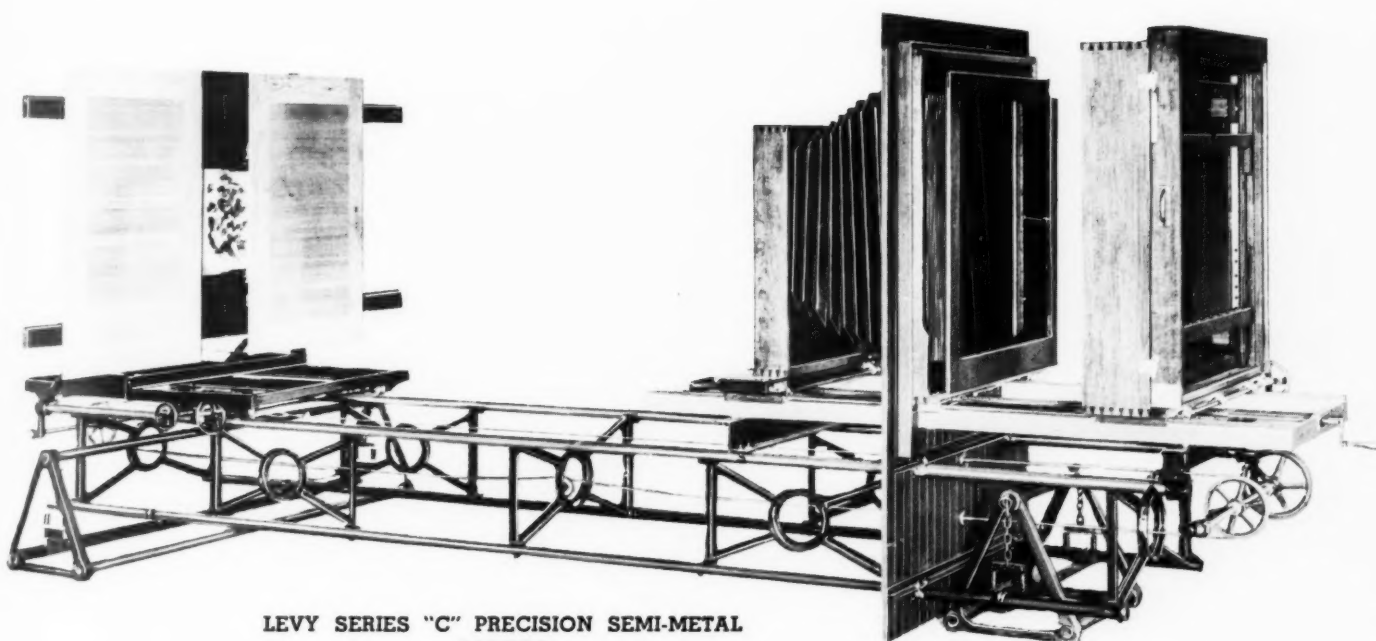
The Photo-Lithographer

1776 Broadway

New York, N. Y.



LEVY SERIES "A" CAMERA
Dark Room Type—showing
wall attached at back box



LEVY SERIES "C" PRECISION SEMI-METAL
CAMERA

Dark Room Type—showing wall attached to
middle box (can be attached to any box). Posi-
tive attachment on stand with split sliding
copyboard.

Equipment of Repro-Art Machinery Co.



IMPROVED SWEIGARD IDEAL BABY VACUUM FRAME
With or Without Vacuum Tank and Automatic Switch

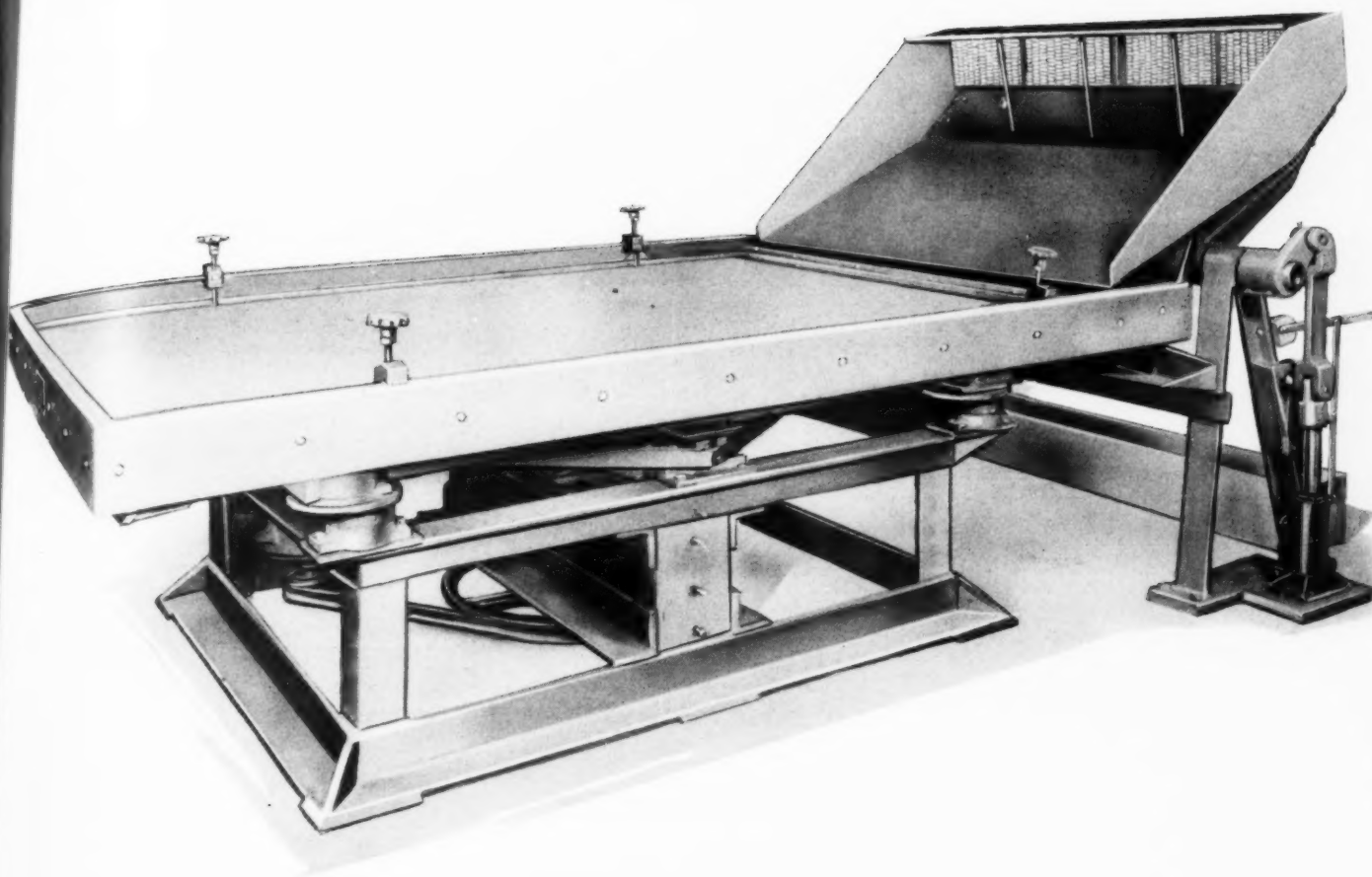


IMPROVED SWEIGARD IDEAL VACUUM FRAME—TYPE C
With or Without Vacuum Tank and Automatic Switch

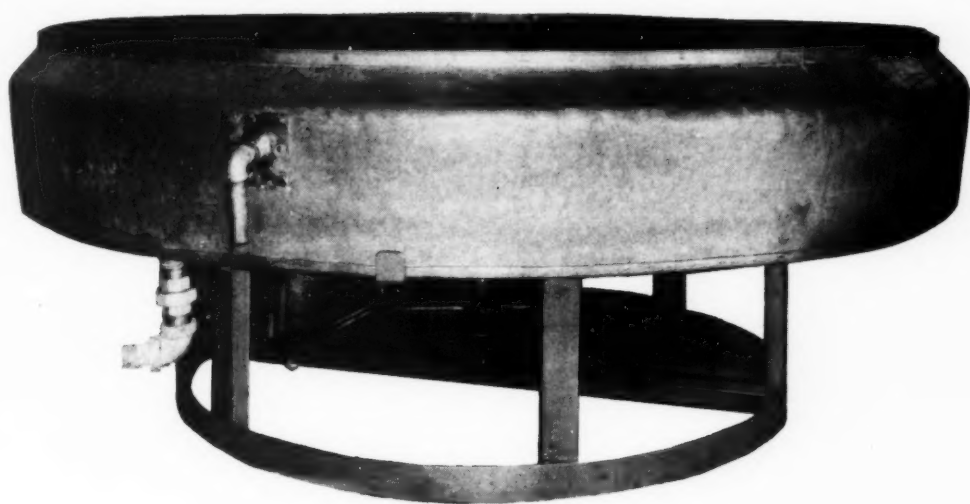


IMPROVED SWEIGARD IDEAL VACUUM FRAME—TYPE B
With or Without Vacuum Tank and Automatic Switch

Equipment of Sweigard Ideal Co.



Zenith Graining Machine



Zenith Whirler

Equipment of Zarkin Machine Co.



REMINGTON NOISELESS TYPEWRITER
Utilizes Remtico Carbon Ribbon, designed to produce clarity and sharpness in copy.



ROYAL CARBON RIBBON TYPEWRITER
Equipped with high-speed ribbon feed and two extra large spools for carbon ribbon.

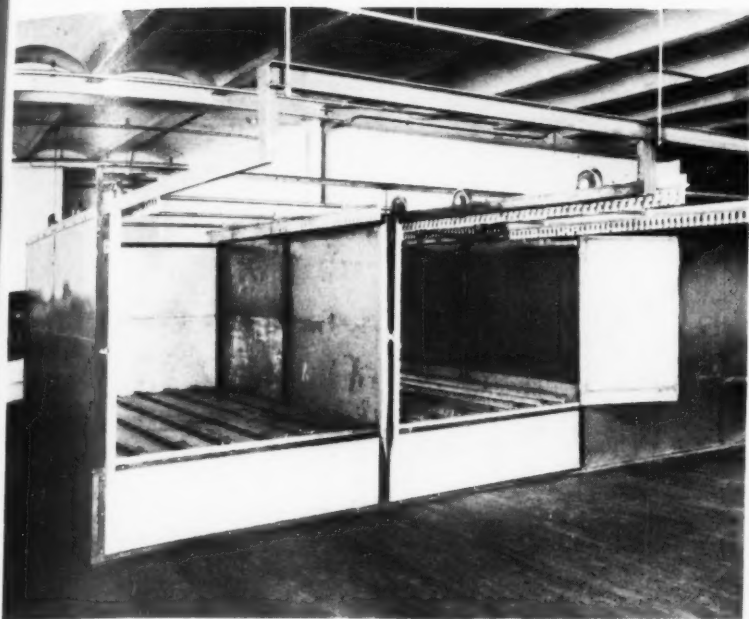


UNDERWOOD NOISELESS TYPEWRITER
Equipped with duplex carbon and fabric ribbon feature. Recommended for Multilith and photo-lithography.



VARITYPER COMPOSING UNIT
Contains built-in devices for composing photo-offset copy, stencil duplicating and gelatin printing devices.

Copy Preparation Equipment



PAPER CONDITIONING MACHINE
Box-Type, Two Compartment



PHOTO-GELATINE WHIRLER

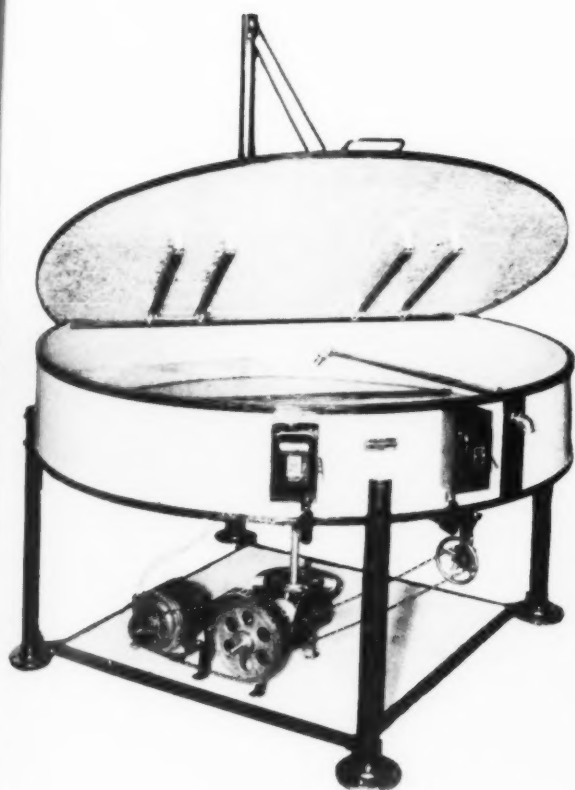
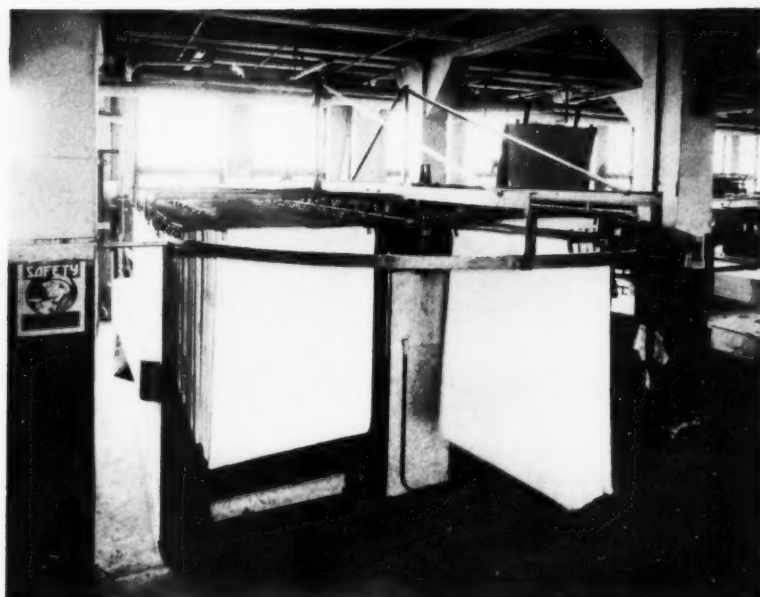


PHOTO-LITH WHIRLER

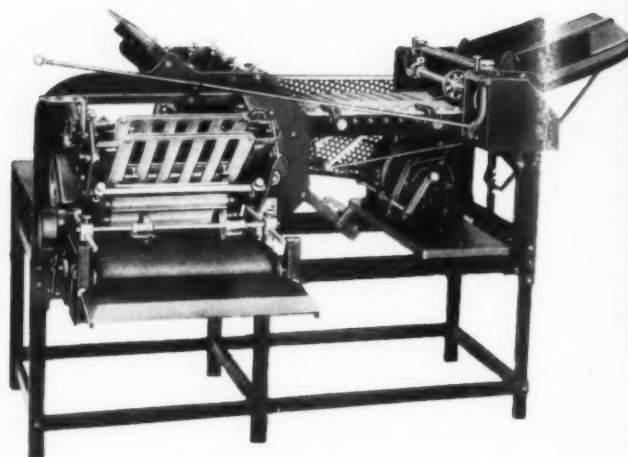


PAPER CONDITIONING MACHINE
"U" Type

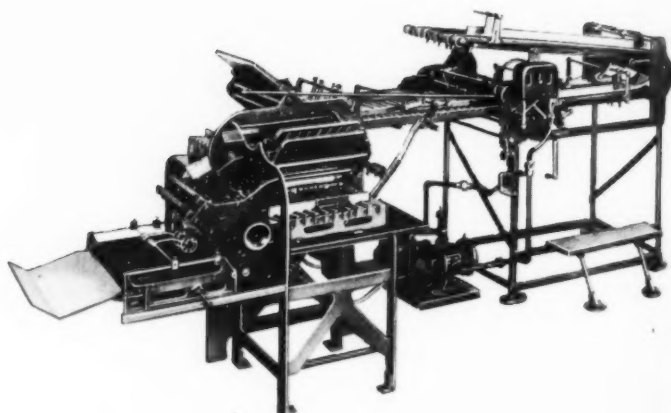
Equipment of Louis Lorenz & Co., Inc.



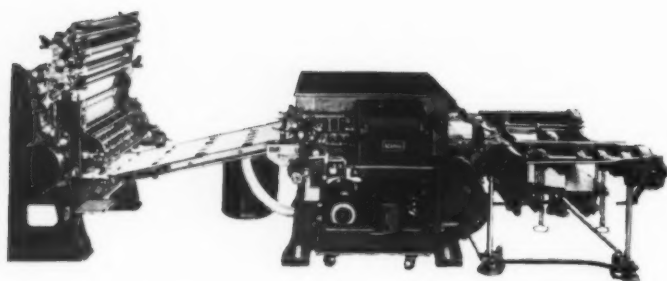
LEVY VACUUM PRINTING FRAME
Quick operating, balanced, ease of access.
Made with glass or blanket.



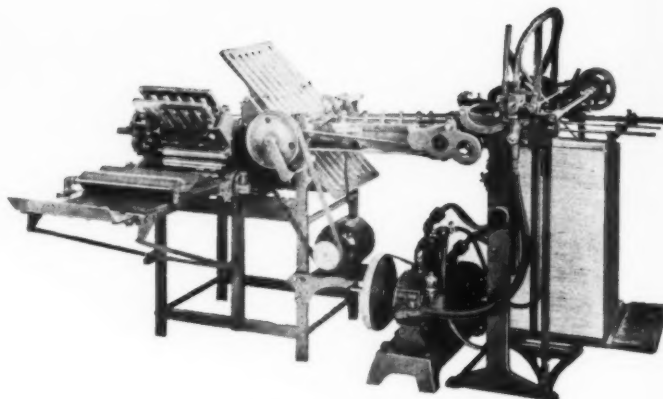
CLEVELAND MODEL "W" FOLDER
Folds sheets ranging in sizes from
3"x4" to 14"x20".



CLEVELAND MODEL DOUBLE "O" FOLDER
Folds sheets ranging in sizes from
4"x6" to 22"x28".



MILWAUKEE BRONZER
Shown above attached to small offset press.

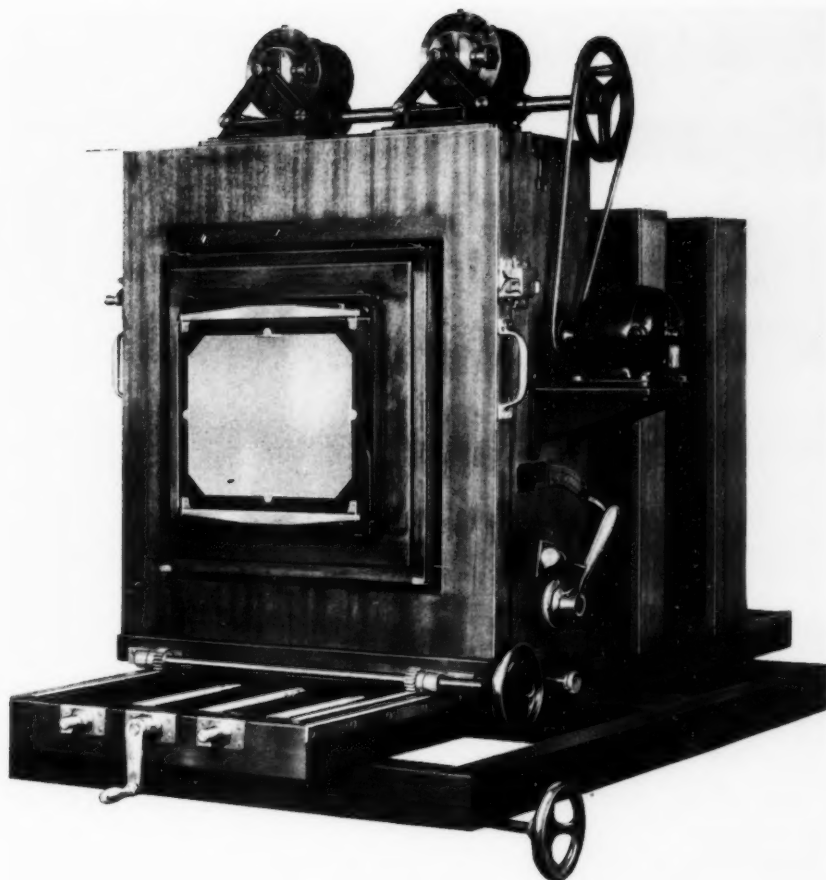


BAUM "QUINTUPLET" AIR-FEED FOLDER
Five folds in one operation, adaptable to
sixty styles of folds.

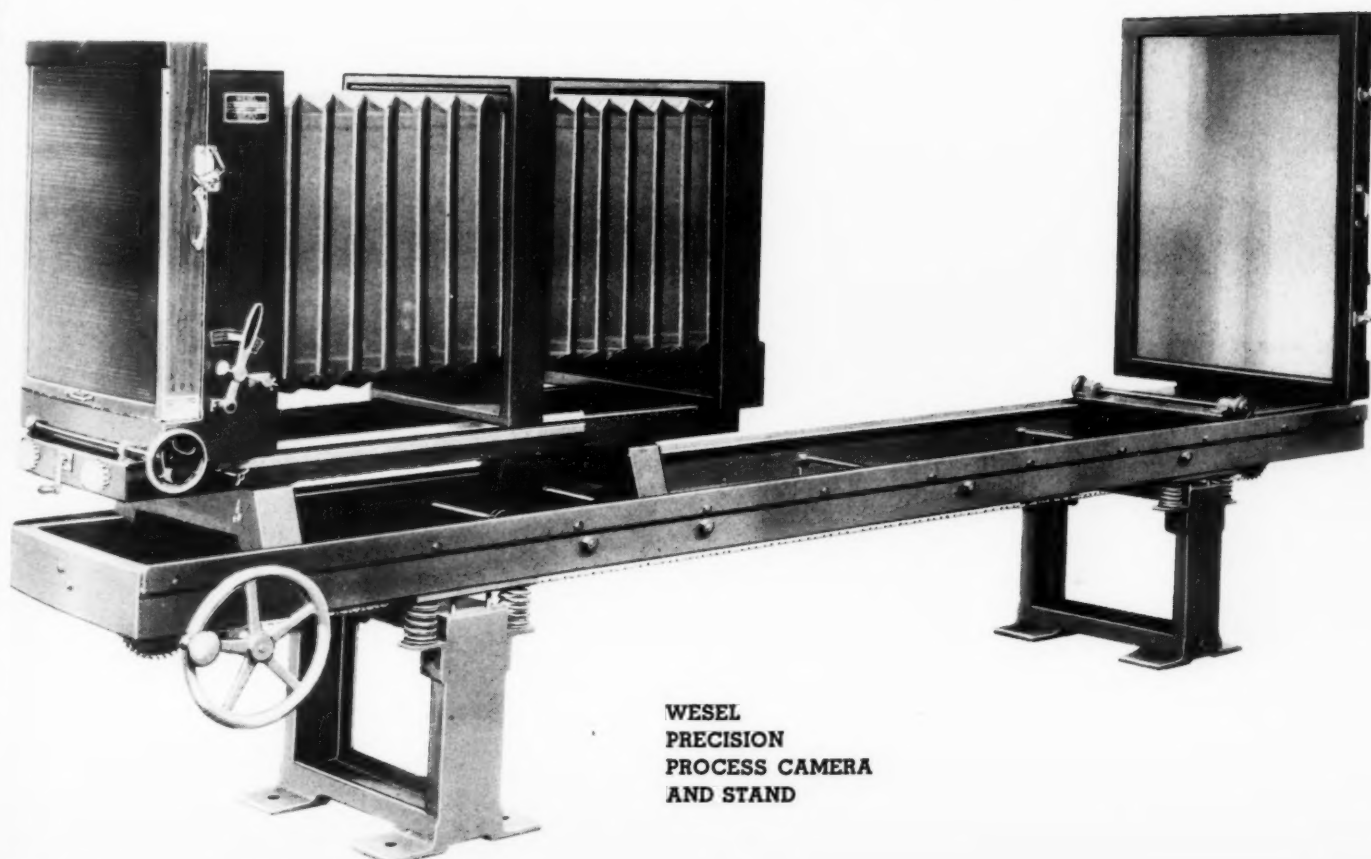


**AMERICAN TYPE FOUNDERS
NON-OFFSET GUN**

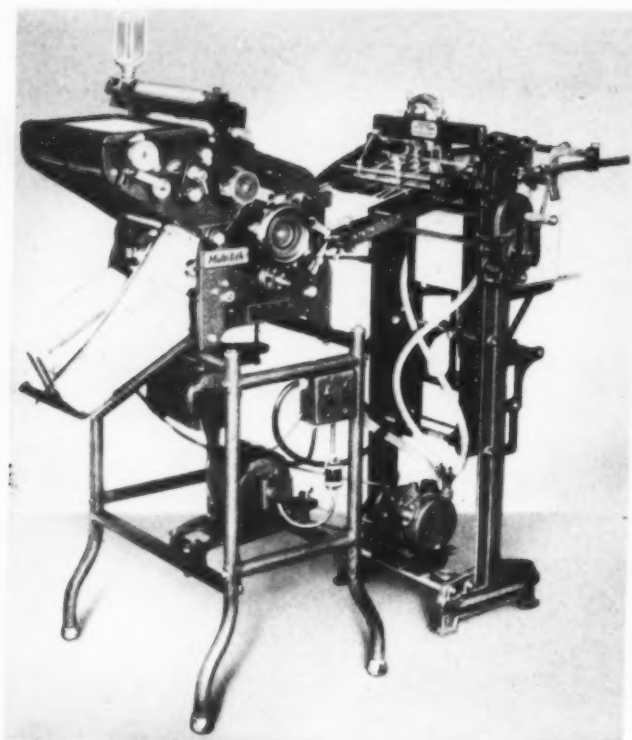
Portable model, adjustable to any press, covers sheet 25 x 38 with single gun head. Can be fitted with additional heads for larger sheets.



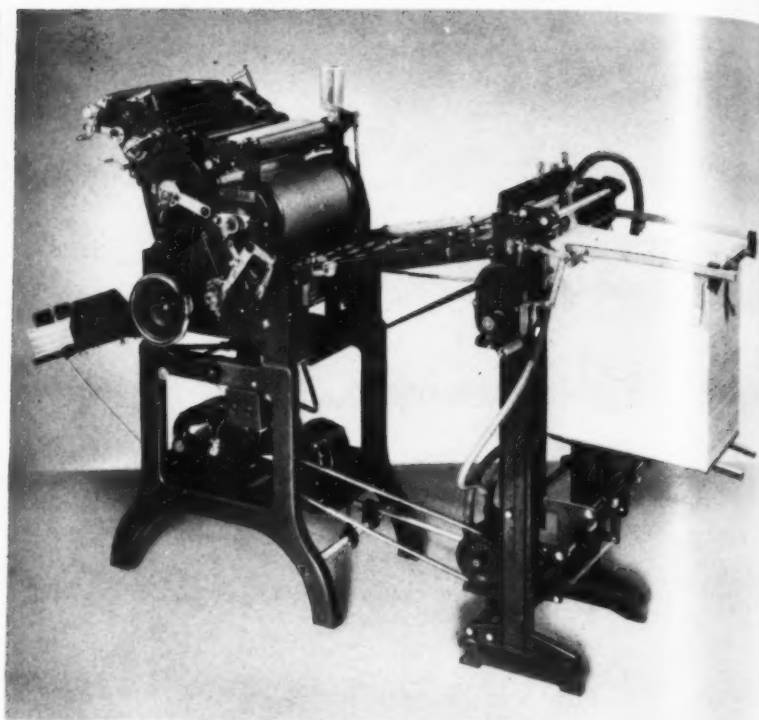
**THE BASSINI APPARATUS
For Making Finlay Color Separations**



**WESEL
PRECISION
PROCESS CAMERA
AND STAND**

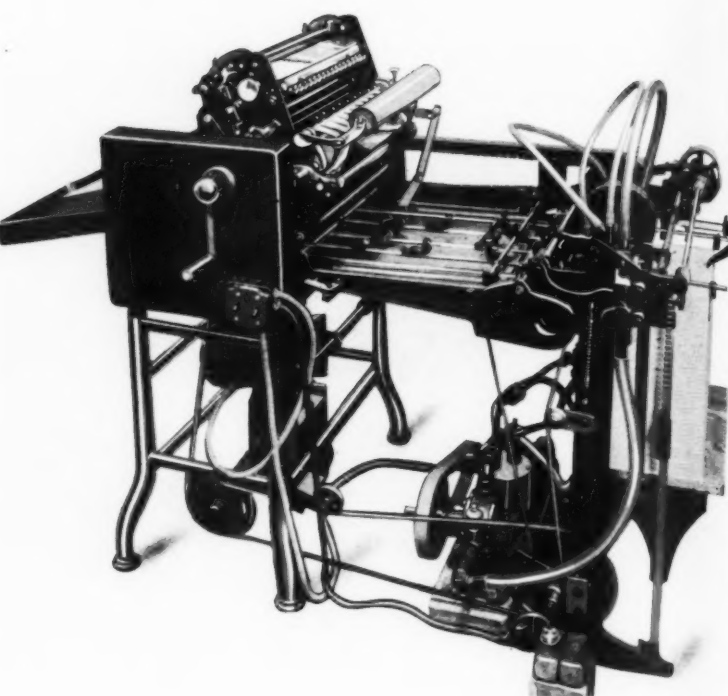
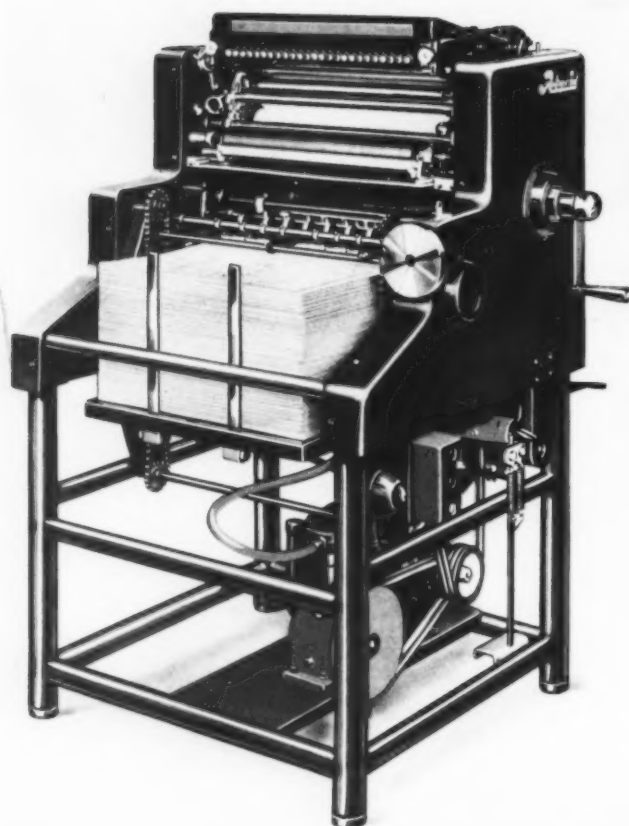


CLASS 1200 MULTILITH



CLASS 1300 MULTILITH

Equipment of Addressograph-Multigraph Corp.



ROTAPRINT MODEL RGS

ROTAPRINT MODEL R-30

Equipment of American Rotaprint Corp.

"WHERE TO BUY IT"

This Handy Reference Page is a regular monthly feature of THE PHOTO-LITHOGRAPHER

Tear it out and tack it up in the shop. It is an accurate guide to reliable firms.

Listings are carried on this page at the rate of One Dollar Per Line per Month or Ten Dollars a Year Payable in Advance

ACCOUNTANTS

Kromberg & Associates, C. P. A.'s, J., 461 Eighth Ave., New York, N. Y.
Reinish, Samuel S., C. P. A., 2 Lafayette St., New York, N. Y.

ACIDS

International Printing Ink Corporation, 75 Varick St., New York, N. Y.
Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.
National Offset Supply Co., St. Louis, Mo.
Pitman, Harold M., Co., 26 Cornelison Ave., Jersey City, N. J.

ADDRESSING AND MAILING SERVICES

Ardlee Service, Inc., 28 W. 23 St., New York, N. Y.
Gray, James Letter Shop 215 E. 45th St., New York, N. Y.

ASGCO GRAINING GRIT (ALUMINUS OXIDE)

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

AGSCO SILICA GRAINING SAND

American Graded Sand Co., 2516-18 Greenview Ave., Chicago, Ill.

AIR CONDITIONING EQUIPMENT

(See Paper Conditioning Machines)

ALUMINUM PLATES

(See Plates)

ALBUMEN

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
Holland, Thor, 7048 Jones Ave., N. W., Seattle, Wash.
Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio,—1076 W. Division St., Chicago, Ill.
International Printing Ink Corporation, 75 Varick St., New York, N. Y.
Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.
National Offset Supply Co., St. Louis, Mo.
Pitman, Harold M., Co., 26 Cornelison Ave., Jersey City, N. J.

ALIGNING PAPER

(See Vogeltypes Paper.)

ARC LAMPS

(See Lamps—Arc)

ASPHALTUM

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
Hilo Varnish Corporation, 42-60 Stewart Ave., Brooklyn, N. Y.
International Printing Ink Corporation, 75 Varick St., New York, N. Y.
Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.
National Offset Supply Co., St. Louis, Mo.
Pitman, Harold M., Co., 26 Cornelison Ave., Jersey City, N. J.

ARTISTS

Hugo L. Sachs, 7 West 20th Street, New York, N. Y.

ARTISTS' SQUARES

Zoltan, John M., 833 Lyman Ave., Oak Park, Ill.

BELLOWS

United Camera Co., Inc., 1515 Belmont Ave., Chicago, Ill.

BENDAY AND SHADING MEDIUMS

(See Shading Mediums)

BINDINGS

Plastic—Brewer—Cantelmo Co., Inc., 118 E. 27th St., New York, N. Y.
Spiral—Spiral Binding Company, 148 Lafayette St., New York, N. Y.
Wire-O—Trussel Mfg. Co., Poughkeepsie, N. Y.

BLANKETS

Bainbridge, Philip M. (Goodrich Rubber Blankets), 37 E. 23th St., New York, N. Y.
Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.
Hoe, R. & Co., 138th St. & East River, New York, N. Y.
Ideal Roller & Mfg. Co., 2512 W. 24th St., Chicago, Ill.
International Printing Ink Corporation, 75 Varick St., New York, N. Y.
National Offset Supply Co., St. Louis, Mo.
Reed Roller & Supply Co., Inc., 415-417 Jackson St., San Francisco, Cal.
Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y. and 402 S. Market St., Chicago, Ill.
Sinclair & Carroll Co., Inc., 591 Eleventh Ave., New York, N. Y.

BLANKETS (Continued)

Sinclair & Valentine Co., 11 St. Clair Pl. New York, N. Y.

Vulcan Proofing Co., 58th St. and First Ave., Brooklyn, N. Y.

BRONZERS

Henschel Mfg. Co., Milwaukee, Wis.

CAMERAS

Agfa-Ansco Corp., Binghamton, N. Y.

California Ink Co., Inc., The, 545 Sansome St., San Francisco, Cal.

Eastman Kodak Co., 343 State St., Rochester, N. Y.

Lanston Monotype Machine Co., 24th at Locust, Phila., Pa.

Levy, Max & Co., Wayne & Berkley, Philadelphia, Pa.

Litho Equipment & Supply Co., Ogden Ave., Sheldon & Lake Sts., Chicago, Ill.

Miles Machinery Co., 18 East 16th St., New York, N. Y.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Pitman, Harold M. Co., 26-38 Corneilson Ave., Jersey City, N. J.

Repro-Art Machinery Co., Wayne Ave. & Berkley St., Philadelphia, Pa.

Robertson, R. R., 1 N. Canal St., Chicago, Ill.

Rutherford Machinery Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Sullebarger Co., E. T., 116 Nassau St., New York, N. Y.

Wesel Mfg. Co., 468 Fourth Ave., New York, N. Y. and Scranton, Pa.

Zeiss, Carl, Inc., 485 Fifth Ave., New York, N. Y.

CARBON (ARC LAMP)

Pease Co., C. F., The, 809 N. Franklin St., Chicago, Ill.

CARBON PAPER

Remington-Rand, Buffalo, N. Y.

CARBONS—Photographic

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio,—1076 W. Division St., Chicago, Ill.

CHEMICALS

Agfa-Ansco Corp., Binghamton, N. Y.

California Ink Co., Inc., The, 545 Sansome St., San Francisco, Calif.

Eastman Kodak Company, Rochester, N. Y.

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio,—1076 W. Division St., Chicago, Ill.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

La Motte Chemicals Products Co., 438 Light St., Baltimore, Md.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

Mallinckrodt Chemical Works, 3600 N. Second St., St. Louis, Mo.

Merck & Co., Inc., Rahway, N. J.

National Offset Supply Co., St. Louis, Mo.

Norman-Willets Co., 318 W. Washington St., Chicago, Ill.

Phillips & Jacobs, 622 Race Street, Philadelphia, Pa.

Pitman Co., Harold M., 26-38 Corneilson Ave., Jersey City, N. J., and 51st Ave. and 33rd St., Chicago, Ill.

Senefelder Company, Inc., The, 32-34 Greene St., New York, N. Y.

Siebold, Inc., J. H. & G. B., 47 Watts St., New York, N. Y.

CLOCKS—Interval Timers

Glogau & Co., 538 S. Clark St., Chicago, Ill.

COMPOSING MACHINES

Coxhead Corp., Ralph C., 17 Park Place, New York, N. Y.

COMPOSITION

Composing Room, The, 325 West 37th St., New York, N. Y.

Grosby Press, Inc., 56 Gold St., New York, N. Y.

Monsen, Thormod & Son, Inc., 730 N. Franklin St., Chicago, Ill.

New York Monotype Composition Co., 461 Eighth Ave., New York, N. Y.

CRAYONS-LITHO

Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., 100 Sixth Ave., New York, N. Y.

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

Korn, Inc., Wm., 120 Center St., New York, N. Y.

Roberts & Porter, Inc., 100 Lafayette St., New York, N. Y. and 402 S. Market St., Chicago, Ill.

CUT-OUTS

F. C. O. Company, 155 Sixth Ave., New York, N. Y.

DAMPENING DEVICES

Goodrich, The B. F. Co., 570 S. Main St., Akron, Ohio

Phone HAYmarket 2446

Established 1896

AMERICAN FINISHING CO.

E. S. DeLEON, Proprietor

FINISHERS TO LITHOGRAPHERS' AND PRINTERS' TRADE

Varnishing, Glossing or Enameling
Gumming or Gluing

Strip, Gum, Gluing or Edge Gumming

Rough Stippling or Roller Embossing

Tin Mounting, Binding or Metal Edging

Die Cutting — Open Die

Paraffining or Waterproofing

Gathering and Collecting Calendars and
Calendar Pads

Wire Stitching Calendars Only

Rolling, Wrapping and Inserting in

Tubes for Mail, Express or Freight

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500-508 SOUTH PEORIA STREET

CHICAGO, ILLINOIS

TO
PHOTO - LITHOGRAPHERS

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Made by
AMERICAN WRITING PAPER CO.

●
In stock in all sizes and
weights, White and India,
as well as fancy finishes.
●

GEO. W. MILLAR
& CO., Inc.

280 - 284 LAFAYETTE STREET
NEW YORK CITY, N. Y.

CAnal 6-0880

DAMPENING DEVICES (Continued)

Meiners, Bernard, 49 Murray St., New York, N. Y.

Wagner, Charles, Litho Machine Co., 51 Park Ave., Hoboken, N. J.

DEEP ETCH SUPPLIES

Parker Printing Preparations Co., 225 East 44th St., New York, N. Y.

Pitman Co., Harold M., 26-38 Corneilson Ave., Jersey City, N. J.

Robertson, R. R., 400 W. Madison St., Chicago, Ill.

DICHROMATE—Ammonium Photo Granular

Hunt, Philip A., Company, 253 Russell St., Brooklyn, N. Y.—2432 Lakeside Ave., Cleveland, Ohio,—1076 W. Division St., Chicago, Ill.

DIES—DIE CUTTING

Fountain Die Cutters and Finishers, Inc., 155 Sixth Ave., New York, N. Y.

Freedman Die Cutting Co., B., 12 Duane St., New York, N. Y.

DIE CUTTING—MOUNTING

Consolidated Mounting & Finishing Co., 516 W. 34th St., New York, N. Y.

DIES—STEEL RULE

P. & J. Die Co., 419 Lafayette St., New York, N. Y.

DRIER—Paste and Liquid

Indiana Chemical & Mfg. Company, Indianapolis, New York City, Chicago

DRYING OVENS

Lorenz, Louis, & Co., Inc., Rose and Duane Sts., New York, N. Y.

Zarkin Machine Co., Inc., 355 E. 27th St., New York, N. Y.

DRYERS

Carter, C. W. H., 100 Varick St., New York, N. Y.

Hilo Varnish Corporation, 42-60 Stewart Ave., Brooklyn, N. Y.

Litho Chemical & Supply Co., 63 Park Row, New York, N. Y.

Sinclair & Valentine Co., 11 St. Clair Pl. New York, N. Y.

DYNAMOS—MOTORS—PRESS DRIVES AND ELECTRICAL CONTROL EQUIPMENT

American Type Founders Sales Corp., 200 Elmora, Ave., Elizabeth, N. J.

Cutler-Hammer Mfg. Co., Inc., 315 N. 12th Ave., Milwaukee, Wis.

General Electric Co., Schenectady, N. Y.

Kimble Electric Co., W. 14th St. & S. Damen Ave., Chicago, Ill.

Northwestern Electric Co., 408 S. Hoyne, Chicago, Ill.

Robbins & Meyers, Inc., Springfield, Mo.
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

ENVELOPES

Dayton Envelope Co., Dayton, Ohio.

ETCHES

International Printing Ink Corporation, 75 Varick St., New York, N. Y.

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Haloid Co., The, 6 Haloid St., Rochester, N. Y.

Hammer Dry Plate Co., Ohio Ave. & Miami St., St. Louis, Mo.

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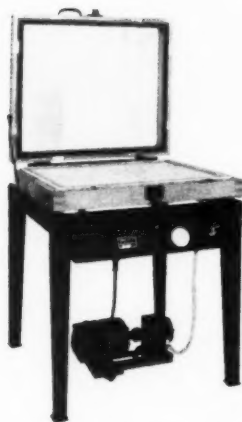
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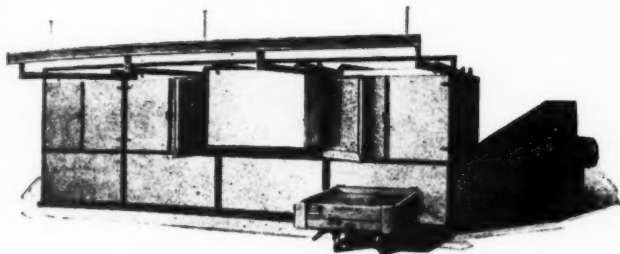
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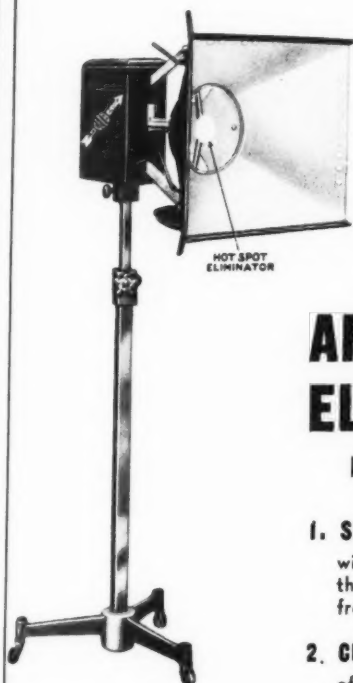
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Dot Etching in Lithography

A Condensed Treatise on a Comparatively Recent Development that Has Attracted Widespread Attention in the Lithographic Field and which is Now Practiced Widely.

By J. S. Mertle

**Director, Graphic Art Division,
G. Cramer Dry Plate Co., St. Louis**

THE amazing progress Dot Etching has made in the lithographic industry is based on sound photo-mechanical principles—the principles of photoengraving, or the reduction of dot size in halftone images according to the tone requirements of the copy submitted for either single- or multi-color halftone reproduction.

Dot etching is strictly a photomechanical process, exactly as is photoengraving. In both processes alteration of tone value in the halftone image is effected by a chemical attack, so to speak, on the sides or periphery of the dots; this has been called “minus etching,” because the dots are rendered smaller in size with continued action, and, what is more important, the ultimate area of the dots is in full control of the etcher.

Whereas the photoengraver carries out the system of minus etching on a copper plate with an insoluble image of fish glue, using ferric chlorid as an etching mordant, the lithographer employs a gelatin dry plate, the Cramer “Super Contrast,” whereon the etching or chemical reduction of the dot is effected with solvents of exposed and developed quasi metallic silver.

Dot etching is steadily supplanting older methods of lithographic tone control, such as the “Submarine Development,” “Staining,” and “Ground Glass” processes; details on these are outside the scope of the present brochure, but are dealt with in the Cramer publication entitled, “Process Photography and Plate Making.”

Mention might, however, be made of the possibility of errors in judgment in such processes, as compared to the greater certainty of dot etching, wherein the halftone dot—the printing element itself—is progressively reduced in size until it represents the correct printing strength in its own minute portion of the halftone issuing from the lithographic press.

The main reason for the success of halftone work in photoengraving lies in the fact that the etcher is at all times master of the situation in tone correction. By a systematic study of the dot formation in its progressive stages of reduction, the engraver can instantly stop when the dots in a certain area have reached their correct size for accurate tone representation and color value—the etched image on the copper plate providing a constant guide for accurate tonal relationship to the copy.

Compare this certainty of procedure with methods heretofore and still in use in lithography. It is this certainty that has permitted the photoengraver to pro-

duce beautiful halftones and striking color effects in three and four colors—color work wherein the lithographic artist frequently demands six or more colors.

But with dot etching, the lithographer is placed on the plane of photoengraving. By application of the same etching principles on Cramer “Super Contrast” emulsions, he is afforded the same certainty of correcting halftone images. With a little experience in the new process, coupled with the great advantage of the offset press in successfully printing fine-screen halftones on attractive and rough-surfaced papers, together with the employment of modern deep etch platemaking methods, the lithographer is in a position to equal or perhaps even surpass letterpress in the field of halftone reproduction.

Dot etching admittedly is not a panacea for all the ills of lithography, but it is the key that will open the door to technical standardization, a state of affairs sorely needed in the lithographic industry.

Methods of Photographic Procedure

Genuine dot etching entails the provision of a halftone positive on a gelatin process emulsion possessing the qualities of the Cramer “Super Contrast” plate. It is only by this procedure that photoengraving principles of certainty are brought into play.

Methods of attempting the work on wet collodion or collodion emulsion images by use of “lacquers” or similar genatinous preparations are merely competitive imitations, which unnecessarily complicate the process, and involve the use of special and expensive materials. Neither can methods of locally reducing halftone negatives be considered in the light of true dot etching; they are simply local reduction, wherein certain areas of the negative are rendered more transparent, with a correspondingly heavier dot formation in the final image on the grained metal pressplate.

With this view in mind, it follows that serious thought must be given as to whether the original negative should be continuous tone or direct halftone. In black and white work, where only minor corrections are required, and where the reproduction is either same size or smaller than the copy, the negative can be direct halftone, with a contact positive made therefrom on a “Super Contrast” plate.

When the reproduction is of large size it would obviously be needless expense to provide a full sized halftone

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negative merely for the purpose of contact printing. In such instances the more practical course of procedure is to make a continuous tone negative of smaller size than the required reproduction (using the Cramer "Alpha" plate for the purpose), and from this negative make a halftone positive in the camera by light transmitted through the negative in a rigid transparency holder.

The same state of affairs exists in color reproduction (more explicit details on color photography are given in our Manual—"Process Photography and Plate Making"). If the work is to be of small size and major correction of images is not required, direct color separation negatives can be made with the halftone screen on Cramer "Spectrum Process" plates, and these used for contact printing on "Super Contrast" plates to provide the necessary etching positives. This method has one advantage in that areas which appear too light in the negative can be locally reduced or "opened up" before making a positive, thus rendering it unnecessary to print the positive darker than required merely to gain sufficient strength in the light tones.

But when the color reproduction is of appreciable size, the most economical method is to produce the primary color separation negatives in continuous tone on Cramer "Spectrum" plates, which are admirably suited for the purpose because of their high color sensitivity to the visible spectrum and their possession of the long scale of gradation so important for the rendition of delicate photographic detail.

It is a known fact halftone positives made in the camera through the halftone screen etch is a more satisfactory manner than those made by contact from halftone negatives. This is due to the fact that the dot formation in contact positives is of a hard and stencil-like form, whereas the dots in camera positives possess a central "core" of extreme opacity and an edge or periphery of graduated density—the result of diffraction and the penumbral shadow action of the halftone screen on the sensitive emulsion during exposure in the camera. The dot formation in a camera positive will "break" more rapidly and uniformly than will the dots in a contact positive, because the uniform density of the "contact" dot resists etching (with subsequent danger of semi-transparency in the final dot), while the graduated density dot of the camera positive permits a ready and quick attack of the etching solution on the dot edges.

In methods of reverse or deep etch platemaking, the dot etched positive becomes an admirable medium for photoprinting on the sensitized metal. Since the positive image must be laterally reversed so as to *read right* on the offset pressplate, it follows that either the negative or the positive must be reversed in position during the process of photography.

Reversal of a direct halftone negative for contact printing necessitates the employment of either a prism or a reversing mirror, but since relatively few lithographic establishments possess these optical devices, the most convenient method is to make the negative in continuous tone and then reverse its position in the transparency holder when exposing the etching positive in the camera.

The speed of the "Super Contrast" plate may be considered from six to eight times faster than the wet collodion plate. It is obviously impossible to provide exact information on exposure (the subject of *Halftone Photography* is exhaustively treated in the Cramer textbook, "Process Photography and Plate Making"), but the following data can serve as an approximate guide when exposing a glossy photograph of normal gradation:

Camera extension at "same size;" 133-line screen, with $\frac{13}{16}$ ths inch screen distance; 18-inch lens at f:32; 30-ampere single-arc lamps, placed 36 inches from the carbons to copy.

Exposure under these conditions will be from 1 to $1\frac{1}{2}$ minutes with a 1-stop method, followed by a suitable flash exposure with an aperture about $\frac{1}{8}$ th the diameter of the detail stop. Recently voiced opinions contend that a flash exposure is not necessary in dot etching (when making a halftone camera positive from a continuous tone negative) because of the dot formation it introduces into the extreme highlights: such contentions are erroneous in that they fail to consider the additional density given the core of the dot by the optical action of the flash exposure. This is much more important than any "ghost" dot formations introduced into the highlights, which, after all, are quickly eliminated in the course of flat etching the image—provided, of course, that the flash exposure has not been carried to excessive lengths.

The aim in exposure should be the creation of a halftone image in which the middletones are approximately correct in comparison with the copy, so as to render unnecessary the lightening or etching of these parts. Given an image in which the middletones are in proper relationship with the original, the highlights and shadows can then be brought to their correct tonal strength by staging out the middletones and "flat etching" the lights and shadows.

Development of Etching Positives

The most important factor in the development of etching positives is to continue the operation until the light-exposed image has been completely reduced to metallic silver. A safe guide is to have the developed image appear visible in a decided black color on the glass side of the plate, signifying complete reduction of the lower as well as surface particles of exposed silver salt in the gelatin emulsion.

In warm weather, when the temperature of the tap water is relatively high, it may be found advantageous to edge the "Super Contrast" plate *after exposure and before development* with a heavy solution of india rubber, so as to prevent entry of the photographic and etching solutions under the emulsion at the edges of the plate.

Developers best suited for dot etching purposes are those which give the greatest density in a reasonable time of development. Caustic soda (sodium hydroxide-hydrochinon) developers should not be used, as they exert a damaging effect on the gelatin emulsion. Metol-

(Continued on page 163)

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LITHOGRAPHIC ABSTRACTS

Abstracts of important current articles, patents, and books, compiled by the Research Department of the Lithographic Technical Foundation, Inc. These abstracts represent statements made by the authors of articles abstracted, and do not express the opinions of the abstractors or of the Research Department. Information concerning the books or periodicals abstracted may be obtained directly by addressing the Department of Lithographic Research, University of Cincinnati, Cincinnati, Ohio.

Photography and Color Correction

The Photograph in Full Color. C. N. Everett. *Inland Printer* 97, No. 3, June 1936, pp. 32-4. The Eastman Imbibition process, the Defender Chromonaet process, and the Autotype Carbro process, all resulting in color photographic prints on paper, are described briefly, and the principles of the one-exposure three-color camera are explained.

The Modern Darkroom. W. B. Bishop. *Process Engravers' Monthly* 43, No. 510, June 1936, pp. 181-2, 193. Darkrooms are rarely planned for efficient work. The author discusses the plan of the room itself and the choice and arrangement of equipment, including light sources, light filters, the silver bath, the drying of plates, the arrangements for developing, the water supply, and the ventilation.

Photomechanical Color Printing-Surfaces. V. F. Feeny. *British Patent* No. 444,229 (1936). Printing surfaces for three-color printing prepared from three color separation negatives, for red, blue, and yellow, respectively, by making positive transparencies of the three negatives, printing from the blue positive superimposed on the yellow negative to make a corrected yellow positive, from the blue positive superimposed on the red negative for a red negative, and from the yellow positive superimposed on the blue negative for a blue positive, the printing plates being made from the corrected positives. Two corrected positives for different shades of the same color; e.g., pink and red, may be made in the case of the red and blue negatives and a black and grey plate from an additional non-color separation negative. The latter may be prepared by successful partial exposures through green and orange filters. If desired, the half-tone screen may be combined with the superimposed negatives in making the corrected positives with or without the interposition of a plane glass plate. Contact printing by means of a concentrated beam of light from a distance may be used, or projection printing may be used.

The C. X H. Modified Color Chart for Photo-Engravers. R. S. Cox and C. D. Hallam. Published by London County Council School of Photo-Engraving

THE PHOTO-LITHOGRAPHER

and Lithography, 6 Bolt Court, Fleet Street, London, E.C. 4, England. 5 s. (1936). A graded strip of eight even tones from solid to white is used. Each sheet in the chart carries one tone of yellow only, and over this the 63 possible combinations and tones of red and blue are printed. A disc is printed beside each grade giving a comparable image of the dot value on the plates when viewed through a magnifying glass. The chart is a convenient guide for any process where dot formations are used to give results in color printing, such as photolitho and mechanical tints. The inks are the British standard shades.

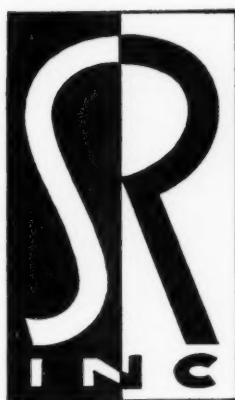
Color Reproduction Process. A. G. Hapke. *U. S. Patent No. 2,046,326* (July 7, 1936). A process for use in a color printing or color reproduction, comprising the use of an ordinary photographic negative of the picture or other thing to be reproduced, to obtain a positive visible print of said negative on the smooth white surface of a waterproof plate, said white surface having been sensitized to produce a blue print positive which is practically of non-photographic value, blacking or shading the portions of the print that are desired to appear in a certain color on the ultimate picture, washing off or removing all other portions of the print, leaving only the treated portions thereof on a white background, and producing a photographic negative of the print thus treated, by directly photographing said print, from which negative the zinc etching or other printing block, for this particular color, is then made.

The Finlay Colour Process. J. W. Stobart. *Photographic Journal* 76 (New Series 60), May 1936, pp. 280-2. The method of making the Finlay screen, starting with an ordinary 175-line halftone screen, is described with mention of the technical difficulties involved. The latitude of the Finlay process is greatest with hypersensitive panchromatic emulsions.

Optical Instruments Taylor-Hobson Three-Color Camera. W. B. Coutts. *Journal of Scientific Instruments*, 12:58-9, February, 1935. A one-lens, three-color camera using pellicle reflector was shown at the 1935 Exhibition of the Physical Society. Fogging by ghost reflections from the filters is said to be avoided. The f\$4.5 "Aviar" lens is focused by means of a built-in range finder of overlapping image type serving also as a viewfinder and having the same field of view as the camera. (*Monthly Abstract Bulletin of Eastman Kodak Company* 22, p. 14 (1936).

Color Separation—Dot Reduction (From Apprentice Lecture Notes). E. Bassist. *Lithographers' Journal* 21, No. 4, July 1936, p. 134. In color correction by dot etching the author recommends that dark portions, such as strong halftones or three-quarter tones, be reduced partially on the continuous tone negative, so that they either photograph correctly or are capable of further reduction. A brief, step-by-step description of the process is given.

(Continued on next page)



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LITHOGRAPHIC ABSTRACTS

(Continued from preceding page)

Planographic Printing Surfaces and Plate Preparation

Practical Significance of Offset Deep. H. Eggen, G. Thiele, and A. Kopf. *Reproduktion*, 6:109-12, June 1935. Quality and length of run in photo-lithography may depend more on the treatment of the plate or the press than on details of the plate-making process, such as whether the plate is printed with albumen, glue, or gum arabic, or whether or not it has been etched intaglio or protected by an insoluble resin. (*Monthly Abstract Bulletin of Eastman Kodak Company* 21, p. 329 [1935]).

Printing Element and Method of Making Same. W. C. Huebner. *U. S. Patent* No. 2,042,003 (May 26, 1936). In the method of producing an ink printing element having a metal base plate, the improvement which includes: etching predetermined image areas of the surface of the metal plate and thoroughly removing all oxides produced by the etching; then applying an oxidizing agent to said cleaned, etched image areas and by the resultant chemical action producing a grease-receptive oxide, in situ, in said image areas; then applying to said grease-receptive oxidized image areas, a greasy, oxidizable compound containing an oxidizing agent and, by the resultant chemical action, uniting, in situ, said compound with the previously formed oxides; and finally applying to the oxidized areas, an oxidizable ink-receptive mixture containing an oxidizing agent and, by the resulting chemical action, uniting the mixture, in situ, with the previously formed oxides.

Art of Printing. J. V. Mehl. *U. S. Patent* No. 2,046,959 (July 7, 1936). In the method of printing lithographically with an ungrained metallic plate having lithographic printing portions and non-printing metallic portions the step of coating the non-printing portions with a mixture of glucose, glycerine, and 50% sodium hyposulfite solution.

The Electricoat Plate in Use: How to Obtain Maximum Efficiency. S. E. Potter. *British and Colonial Printer and Stationer* 118, No. 400, June 18, 1936, pp. 682, 684. The Electricoat plate has an absorbent surface about .0005 inch thick, providing a uniform depth for holding moisture. This coating must be filled completely with dichromated albumin or developing ink will be retained in non-printing areas. A formula for an albumin sensitizer, recommended by the London School of Printing, which produces a thicker coating (requiring a somewhat longer exposure time) is given. The gum solution must also be thicker.

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Equipment and Materials

Photographic Printing Machine. A. G. Ogden. U. S. Patent No. 2,010,561 (Aug. 6, 1935). A photographic printing machine is described in which various letters and characters can be positioned for photographing by pressing keys on the machine. (*Monthly Abstract Bulletin of Eastman Kodak Company* 21, p. 377 [1935]).

Method and Means for Dampening Printing Surfaces of Planographic and Analogous Presses. J. G. Goedike. U. S. Patent No. 2,043,995 (June 16, 1936). In a printing press, the combination of a printing member, inking mechanism including an ink distributing drum, means associated with said drum for controlling the temperature of its surface in order to condense moisture thereon and means for transferring the moisture from the distributing drum to the printing member.

The Eastman Transmission and Reflection Densitometer. A. C. Morrison and J. W. McFarlane. *Process Engravers' Monthly* 43, No. 510, June 1936, pp. 189-90, 193. An instrument adapted to the measurement of either transmission or reflection densities is described, and explained by the use of diagrams.

Paper and Ink

The Conditioning of Paper in Offset Printing. C. G. Weber. *Heating, Piping and Air Conditioning*, March 1936, pp. 137-9. By raising the moisture content of paper to a point somewhat above equilibrium with pressroom humidity, compensation is made for the tendency of paper to absorb water and expand on the press. This conditioning must be carried out in a separate room, or by the manufacturer, and is necessary if the full benefits of air conditioning are to be realized. The various types of air conditioning systems and the use of the sword hygrometer to measure paper humidity are discussed.

Air Conditioning of Paper and Printing Plants. W. G. Schlichting. *Paper Trade Journal* 103, No. 1, July 2, 1936, pp. 21-2 TS. The average moisture contents of different kinds of paper at various relative humidities are tabulated. The effects of moisture content on strength, folding endurance, static electricity, ink absorption, and weight, and the effects of unequal moisture absorption on curling, waving, and bulging are described, and the control of moisture content of paper by the manufacturer, and of pressroom humidity by the printer to avoid these difficulties are discussed.

Process and Apparatus for Conditioning Sheets of Paper. W. H. Leslie. U. S. Patent No. 2,038,228 (April 21, 1936). In a device of the class described, the combination of a rack; means for suspending sheets of paper by one edge transversely of the rack in a longitudinal series; an air conduit extending longitudinally of and below the rack and having a plurality of air outlets in a series longitudinal of the conduit; and means interposed between the outlets and the paper on the rack

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movable to direct air jets from the air outlets at different angles to the paper and alternately against opposite sides of the sheets.

Check—Offset Inking Problems. Anonymous. *Inland Printer* 97, No. 3, June 1936, pp. 36-7. The difficulties encountered frequently in offset inking, methods of diagnosing these difficulties, and their probable cures.

Materials That Make the Job from the Ink-maker's Standpoint. H. Stockmayer. *Lithographers' Journal* 21, No. 2, May 1936, pp. 56-7, 75. The pigments, vehicles, compounds, and resins used in ink manufacture, their compounding, and the characteristics required in inks for special purposes are discussed.

General

Offset Lithography: Negative or Positive Printing? H. Eggen, *Klimschs Jahrbuch*, 28:114-16, 1935. That positive printing and the deep-etch process result in better quality than direct albumen prints from negatives is no longer questioned. Many advantages are listed. Offset printing without dampening is still an unsolved problem. (*Monthly Abstract Bulletin of Eastman Kodak Company* 21, p. 330 [1935]).

Setting Type Photographically. R. B. Fishenden. *Paper and Print* 9, No. 34, Summer 1936, pp. 162, 164, 166. The difficulties met with in "set," spacing, and justification are in process of solution, but the problem of making corrections, and the fact that a type face cannot be enlarged or reduced in size without changing its general characteristics, are causing concern. A brief mention of new machinery is made.

Miscellaneous

The Kodachrome Process of 16mm. Color Cinematography. (Kodak, Ltd.). *British Journal of Photography* 83, No. 3960, March 27, 1936, pp. 194-6. The principle of subtractive three-color photography is outlined briefly. In the Kodachrome process the same film effects both the color separation and the final color combination. Diagrams are used to illustrate the nature of Kodachrome film, the action of light during its exposure, and the changes produced by methods used in processing.

Evaluating Printing Processes. W. J. Wilkinson. *National Lithographer* 43, No. 7, July 1936, pp. 32-3. The advantages of offset printing, particularly of offset using deep-etched plates, are enumerated and compared with the advantages of letter-press and gravure. Fine offset lithography can be done in four colors with the elimination of many steps, with greater speed, and on a far greater range of papers than can color printing by letter-press.

Rotogravure. J. S. Mertle. *Graphic Arts Monthly* 8, No. 6, June 1936, pp. 8, 10, 12, 42-4; No. 7, July 1936, pp. 12, 14, 16, 40-3. The author describes the historical background of rotogravure and gives a technical explanation of the modern process.

Dot Etching

(Continued from page 156)

hydrochinon developers, such as the following, have been found very satisfactory:

Hot water (125° F.)	64 ounces
Metol (Elon, Pictol)	56 grains
Sodium sulfite	10 ounces
Hydrochinon	560 grains
Sodium carbonate	5 1/2 ounces
Potassium carbonate	1 1/2 ounces
Potassium bromid	280 grains
Cold water to make	1 gallon

Develop for about 7 minutes at 65° F.

Hot water (125° F.)	64 ounces
Metol	60 grains
Sodium sulfite	12 ounces
Hydrochinon	3 ounces
Potassium carbonate	12 ounces
Sulfuric acid	2 minims
Potassium bromid	1 ounce
Cold water to make	1 gallon

Develop from 3 to 4 minutes at 70° F.

A popular practise among etchers during hot weather is to augment the resistance of the "Super Contrast" plate against possible physical injury during manipulation: in warm tap water by recourse to the following procedure: immediately after development—*without washing the negative*—place the plate for about 30 seconds in a 25% solution of chrome alum, then, *without washing*, immerse it in the fixing bath.

Claims have been made that dry plates possessed of an emulsion able to withstand very high temperatures are better suited for warm-weather dot etching. While the physical characteristics of such plates may have a certain appeal, the abnormally hard emulsion resists the action of etching, and considerable reetching time must be spent in reducing large sized dots to the small size required in delicate highlight effects.

During warm weather, some operators prefer to immerse the developed "Super Contrast" plate in a 5 or 10% solution of formaldehyde before placing it in the fixing bath. This effectively hardens the emulsion, but the treatment should not be overdone, or extreme tanning of the gelatin film will result.

Fixation of Etching Positives

Acid-hypo and chrome alum baths can be used for the purpose. To insure permanency and freedom from any stain, the time-honored principle of leaving the plates in the fixing bath from 10 to 20 minutes after disappearance of the final vestiges of creamy silver salt cannot be too strongly emphasized.

A simple and efficient formula for an acid-hypo fixing bath is:

Hypo	32 ounces
Potassium metabisulfite	4 ounces
Water to make	1 gallon

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Chrome alum baths are in wide use, chiefly because of their hardening properties, but such baths should be used as soon as possible after preparation, as they lose their hardening property in a few days. A representative chrome alum fixing bath consists of:

	A	
Hypo		32 ounces
Sodium sulfite		2 ounces
Water to make		96 ounces
	B	
Water		32 ounces
Potassium chrome alum		2 ounces
Sulfuric acid, C.P.		3/4 ounce

Pour B into A while stirring A rapidly, so as to prevent precipitation.

Rehalogenization in Dot Etching

This is nothing more than a secondary development of the plate to still further increase the capacity of the dot formation. Coupled with a slightly greater increase in density of dot, rehalogenization also promotes a faint relief to the dot formation, a feature occasionally useful in staging and crayoning the image because of the added "tooth" afforded the brush and litho crayon.

Rehalogenization (frequently called "metallizing") may be carried out on the "Super Contrast" plate after

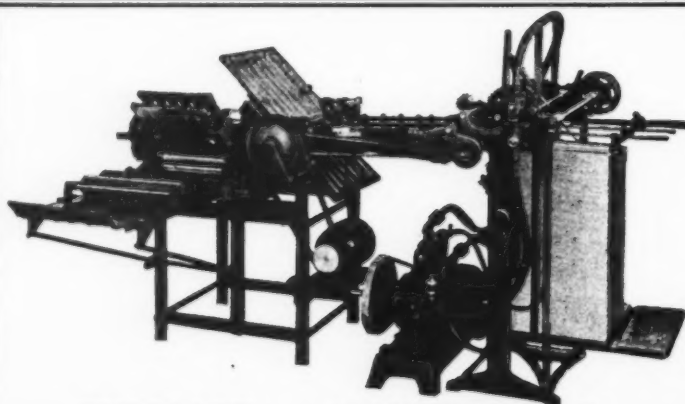
fixation, though the operation is by no means necessary with a properly exposed and developed positive. The commencing step is to bleach the thoroughly fixed and washed plate in:

Copper sulfate	4 ounces
Potassium bromid	4 ounces
Ammonium bichromate	1/2 ounce
Hydrochloric acid	2 ounces
Water to make	1 gallon

After the image has been bleached to a uniform creamy color, it is washed well to remove the yellowish discoloration of bichromate—then taken into *very bright* light (sunlight, if necessary) and blackened in the developer used for the original exposure. The image must be completely blackened, which can be determined by examining the glass side of the positive. The operation may be repeated, if desired, some operators contending that still greater density of image is obtained by this procedure. After blackening, the plate is washed and dried before commencing the process of etching.

Etching of Halftone Positives

What is termed "etching" is actually a systematic chemical reduction of dot size in the halftone positive. It is parallel to the "cutting" of the wet collodion photographer—but with the certainty and accuracy of the photoengraving copper etcher.



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The etching solutions used on dry plates must naturally be of a photographic character, the most commonly used being the familiar Farmer's reducer of the dry plate worker, and the iodo-cyanid reducer used in wet collodion photography. The latter is of a poisonous nature, but is much more reliable than the mixture of hypo and ferricyanid used in the Farmer type.

Farmer's reducer may be preferred by some etchers because of its non-poisonous properties, and the fact that it is quickly and easily prepared by mixture of stock solutions of sodium thiosulfate and potassium ferricyanid. Probably the most convenient method of using Farmer's reducer is to prepare a stock solution of sodium thiosulfate (hypo) of a standard strength, say 35° with a Baume hydrometer; also a 30% solution of potassium ferricyanid. These are kept separate, and both mixed together in a sufficient quantity just before use. The practise among experienced workers is to gage the strength of the etching bath by the color of the solution, which should be of a yellowish hue.

Quite elaborate instructions and formulae have been devised for the use of Farmer's reducer in reetching of halftone images, some of which are based on the addition of glycerin to the etching solution, with the aim of promoting greater control of the operation. The objection voiced by the average workman against such methods is the time and care required in the preparation of solutions according to strict hydrometric tests.

Compared to Farmer's reducer, iodo-cyanid is possessed of far greater reliability (especially for the systematic requirements of dot etching), also necessitating less washing of the image for removal of the etching solution. Objections may be raised by the uninformed regarding its poisonous nature: against this may be cited the fact that iodo-cyanid has been in use in the wet collodion process for over half a century, with cases of

accidental fatal poisoning an extremely rare occurrence.

One or two precautionary measures should be held in mind: first, any smarting sensation felt when beginners' hands come into contact with cyanid baths should be followed by an application of ferrous sulfate solution; secondly, and most important, *never permit acids to come into contact with cyanid solutions*, as a very poisonous gas, *hydrocyanic acid*, is liberated by such mixtures. But since acids of any kind are taboo in actual etching solutions for dry plates, there is no good reason why such an intermixture should occur.

In company with Farmer's reducer, two stock solutions are required for preparation of the iodo-cyanid etching solution:

Iodin Stock Solution

Potassium iodid	2 3/4 ounces
Iodin, resublimed	1 ounce
Water	32 ounces

Cyanid Stock Solution

Sodium cyanid	6 ounces
Water	32 ounces

For use in tray, take:

Iodin stock solution	4 ounces
Cyanid stock solution	12 ounces
Water	64 ounces

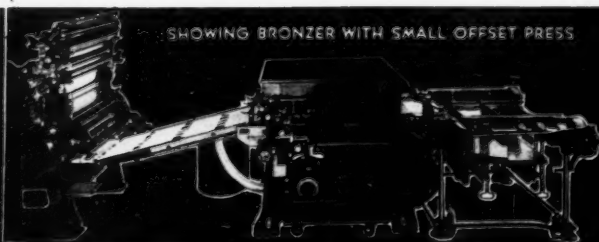
This strength of bath will permit of considerable latitude in etching, a desirable condition during the first trials. If more rapid action is desired for brush reetching, reduce the quantity of water by half.

Using a bath of the above proportions, the "flat" or sharpening etch for a properly prepared positive will

(Continued on page 167)

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Dot Etching

(Continued from page 165)

range between one and two minutes, depending on the nature of the desired preliminary correction.

Always soak the plate in water for about 30 seconds before commencing etching, so as to promote a uniform action of the solution on the plate, and also to determine whether the staging materials have been applied in sufficient thickness to repel the etching bath. On examination by transmitted light, any insufficiently protected areas will be immediately noticeable by a suspicious transparency in the applied coating. For safety sake, such positives should be quickly dried and another application of staging fluid given these parts, so as to prevent the etching solution from penetrating the resist and probably ruining the positive by streaky action on supposedly protected parts.

After completion of the first "bite" or etching period, wash the plate for about one minute, then place before a fan to dry.

The next step usually is protection of some area wherein the dots have arrived at a size correct for proper tonal representation. This is known as "staging," a term borrowed from the photoengraving industry, and indicating application of a greasy or impervious material that is capable of resisting the action of the etching solution wherever it is applied.

Special solutions are marketed for this purpose, though the staging preparation of the copper etcher can also be used, if it is rendered thicker by the addition of asphaltum or a small percentage of beeswax dissolved in warm turpentin.

Other materials may be used, such as brown Duco paint, first rendered rather greasy by adding a bit of tallow dissolved in turpentin. A very efficient staging solution for dot etching is composed of Egyptian asphaltum dissolved in naphtha to about the consistency of a heavy paint. After application of this solution, bronze powder is dusted over the staged parts, and the surplus powder dusted off the plate with a dry cotton pad which has been previously charged with finely powdered talc or magnesia.

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is transparent and has the benday pattern reproduced upon it in either opaque black or opaque white as ordered for either positive or reverse effects . . . 56 patterns available.

While only 9 patterns are shown herewith, there are 56 patterns available in positive and reverse effects.

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MADDOX

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As to what areas require staging will naturally depend entirely on the positive and the type of original. Nothing definite can be said in this respect; the positive is the guide to the entire procedure.

When the parts of correct tonal strength have been stopped out with staging solution, the plate is given another etch, after which it is examined with a magnifying glass to study the exact size of the dot formation throughout the image. The most convenient arrangement for dot etching is to have the sink illuminated along its sides with electric lights (the tube variety) fitted into marine sockets for protection against moisture. The light is then transmitted through the positive, thus affording the necessary illumination for examining the image while the plate is lying on the rack in the sink.

Successive stages may be applied at any time, so as to protect any areas that have been etched to the proper dot size. The staging solution is applied wherever necessary, and the positive then submitted to another etch.

Staging obviously is productive of "hard line" effects, or a sharp demarcation of tone values wherever staging is performed. Softer effects can be achieved by crayoning the image. A lithographic crayon is used for this purpose, and is applied in all instances where a sharp division of tone is unwelcome, such as in portraiture, foliage, vignettes and other effects of a soft and delicate nature.

Reetching or local lightening of parts is performed by applying the etching solution with Chinese quill brushes, such as are used in photoengraving. The plate should be swabbed relatively dry, and the brush, barely moistened with etching solution, applied to the fine details. This system is especially effective for the introduction of highlights, and for the rendition of fine shadow detail. Very effective vignettes can be produced by reetching the parts so that the size of the dots gradually decreases until they disappear.

After completion of the etching operation, the staging and crayoning on the surface of the plate is removed with turpentin or other solvents, after which the positive is ready for use for the production of a deep etch press-plate.

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Rates for this section, 25 cents per line; minimum \$1.50. Count eight words to the line, address to be counted. Remittance must accompany order. Box number addresses are confidential and cannot be revealed. Unless otherwise stated address replies to The Photo-Lithographer, 1776 Broadway, New York, N. Y.

For Sale

PLATE WHIRLER—Size, 45½ x 54; directoplate camera size 20 x 24 circular screen; one directoplate proving press. All can be seen in use. National Offset Supply Co., St. Louis, Mo.

HARRIS PRESS—I two-color Harris Offset Press, GT—41 x 54"—8 years old. \$13,500.00 cash. Box 890. THE PHOTO-LITHOGRAPHER.

PLATE MAKING EQUIPMENT—Equipment of Wm. E Rudge Co., in whole or in part, including cameras, screens, lenses, step and repeat machine, vacuum printing frame, whirlers, and any part of the platemaking equipment. Miles Machinery Co., 18 East 16th St., New York, N. Y.

PROCESS CAMERA—One 40x40 process camera with iron stand and 36 in., 120 line circular screen, at great bargain. Miles Machinery Co., 18 East 16th St., New York, N. Y.

Help Wanted

OPPORTUNITY—Large Canadian printing firm, about to enter lithographic field, seeks capable young man who is thoroughly conversant with the operation of a lithographic plant. Must know how to direct and build sales, in addition to supervising technical side of plant. Give full details. Unusual opportunity for an ambitious, aggressive young man who possesses the qualifications outlined above. Address Box 931, THE PHOTO-LITHOGRAPHER.

PHOTO-OFFSET SALESMEN—We desire two high-grade photo-offset salesmen. Must have real record of accomplishment. Compensation commensurate with ability. Address Ralph C. Coxhead Corp., 17 Park Place, New York, N. Y.

SUPERINTENDENT—Man of more than average ability as superintendent of 6 press plant doing photo offset and color lithography using single and two color presses. Successful applicant must have a practical working knowledge of offset presses, must be able to handle with judgment and dispatch the many details so that production schedules can be maintained; must know progress of each job in plant so as to talk with customers; must command the respect of employees to efficiently maintain maximum production. This is a hard job, but a real opportunity for the right man. Address Box 726, THE PHOTO-LITHOGRAPHER.

FOREMAN—Good steady position open for working foreman in planographing and offset plate-making department. Plant located in Boston. Give full details, experience, references. Address Box 703, THE PHOTO-LITHOGRAPHER.

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COPY PREPARATION—PRODUCTION ASSISTANT—Alert young woman, two years practical experience in lithographic plants. Expert paste-up work; also opaquing and silhouetting. Can draw black and white sketches. Knowledge of advertising layout and production. Address Box 991, THE PHOTO-LITHOGRAPHER.

PLATEMAKER-PHOTOGRAPHER—Eight years experience in New York plants. Address Box 901, THE PHOTO-LITHOGRAPHER.

PHOTOGRAPHER—Thirty years experience on wet plates. Employed in well known offset and photo-engraving plants. Address Box 902, THE PHOTO-LITHOGRAPHER.

PRESSMAN—College man, aged 28, experienced on all sizes Harris presses. Well acquainted with color work. Address Box 924, THE PHOTO-LITHOGRAPHER.

PROOFREADING-COPY PREPARATION—Young woman offers eight years experience as typist, proof-reader and copy assistant, in large lithographic plant. Address Box 916, THE PHOTO-LITHOGRAPHER.

Miscellaneous

ACOUSTICAN—For sale, complete, with dry battery, practically new. Also perpetual battery, charger and amplifier. Address Box 933, THE PHOTO-LITHOGRAPHER.

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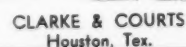
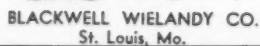
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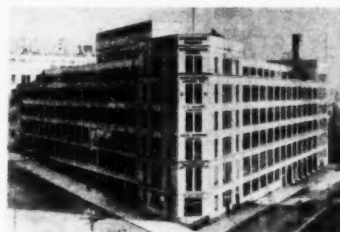
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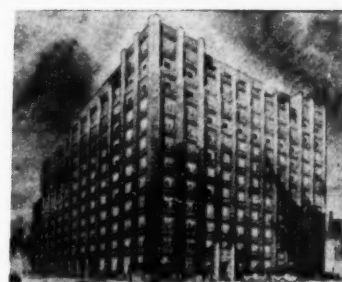
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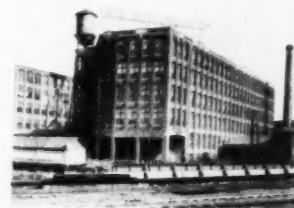
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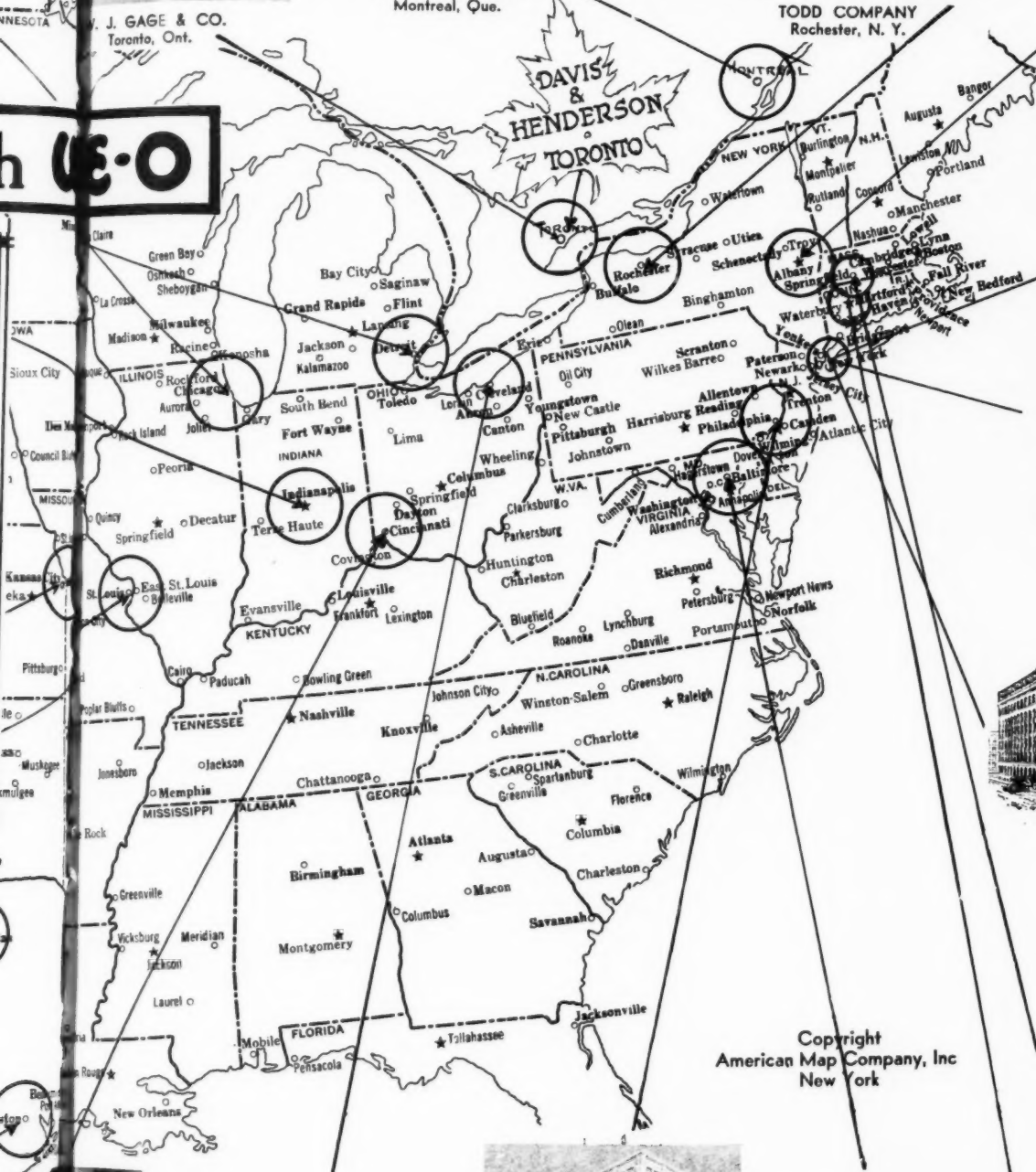


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for the

PHOTO LITHOGRAPHER

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EQUIPMENT
SUPPLIES**
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OFFSET PRODUCTS CORPORATION
103 Lafayette Street
New York, N. Y.

FOREWORD

In compiling this booklet, we have endeavored to give you a ready reference guide to offset supplies and equipment, briefly, yet efficiently, described.

It is our sincere hope that you may find among the various items listed, the type of product most suitable to your particular requirements.

For the convenience of our customers, we have installed a complete **PHOTOGRAPHIC and PLATE MAKING DEPARTMENT**. In the event of any difficulties arising in your own plant, we are in a position to furnish to you both film and paper negatives, in line or halftone. We can also make press plates from our negatives or from negatives supplied by you.

We are pleased to offer our experience to the **OFFSET PRINTER**, and it will be a distinct pleasure for us to answer any technical question that may arise. All such inquiries, whether by mail or otherwise, will be treated in strictest confidence.

Customers who wish to establish credit relations with us are invited to submit one bank and two trade references.

Terms: 2% ten days, net 30 days, F. O. B. **New York City**, to firms having satisfactory rating in the Commercial Agency books.

On all **C. O. D.** shipments, a small deposit is required at the time the order is placed; the usual cash discount prevails on all **C. O. D.** transactions.

All Prices F.O.B. New York

NEGATIVE AND PLATE MAKING SERVICE

For the convenience of our customers we maintain a **complete** PHOTO AND PLATE MAKING DEPARTMENT. We place **ourselves** at your command in order to aid you in any **difficulty** that you may encounter.

Send us your negatives or plates for **inspection**. We gladly suggest any **necessary** corrective measures or offer technical advice without charge to you.

We make blue prints on metal plates, red powder offsets for color work, color separation negatives or positives, and press plates up to 49" x 68".

CLEANING SERVICE FOR OFFSET BLANKETS

For the offset press department, we have installed an **entirely new** and **novel cleaning service**.

We take your **old worn-out** rubber blankets, blankets which have received **improper** treatment, blankets upon which **poor** ink has been used, are **tacky**, etc., and submit them to a **thorough** cleaning process, an **entirely new method**, which **restores** them to their **former** printable condition.

Send us your old blankets, whether large or small, for **reconditioning**. Further details may be obtained upon request.

From time to time we shall issue literature on **PHOTO OFFSET LITHOGRAPHY**; if you are interested, please write to us and we will place your name on our mailing list.

FULLY PERPENDICULAR-DUSTLESS ROTO PHOTO-LITHO WHIRLER

For Washing, Sensitizing, and Drying of
Lithographic Plates

This new **ROTO PHOTO-LITHO WHIRLER** is of a **perpendicular** type for the proper, **spotless**, coating of plates. It has always been the foremost hazard for the platemaker to coat plates over again due to dirt spots on the freshly coated plates. Whirlers of the present construction rotate in a horizontal direction, after the coating solution has been poured on the plate. During the process of coating a plate, the surplus of the sensitizing material is sprayed **radially** outward against the walls of the whirler. After several plates have been coated, some of the **previously** sprayed material that has hardened on the walls of the whirler, becomes **loosened** and **drops** down on the newly coated plate.

In the new, upright, **ROTO WHIRLER**, means have been provided not only for whirling, drying, and confining the plate in a housing, but also for receiving and holding any sprayed material or other matter leaving the plate, so that each succeeding plate cannot be subjected to the possibility of having foreign matter dropped thereon. Moreover, the plate is dried **completely** on **both** sides in considerably **less** time than in the horizontal whirler.

No **Progressive Photo - Lithographer** should be without this machine. (Patents pending in U.S.A. and Foreign Countries.)

ROTO GRAINING MACHINE

ROTO GRAINER, as the name implies, is a patented machine that offers an **improved** method to produce **accurate** and **distinct** grains of a wide variety.

Circular motion is acknowledged as the most **efficient** graining method. In the **ROTO GRAINER** we have **achieved** a perfectly controlled motion, which imparts this motion to every section of the tank.

ROTO GRAINER is original in design. It has been exhaustively tested. **Comparative** tests conclusively prove that it **does** lower the cost of graining. We recommend this graining machine to firms who **prefer** to do their own graining, in order to fill their **own immediate** needs and **conditions**.

The principle involved in the graining of plates necessitates the use of a sand harder than the metal plates, which move crosswise under pressure produced by the weight of the graining material. By this action, the surface of the plate is given scratches which differ in length, depth, and number. The depth of the grain is dependent upon the hardness and size of the graining material and the amount of pressure used. The weighing materials are the usual marbles of steel or glass, which differ from $\frac{1}{2}$ " to 1" in diameter.

The machine itself consists of a strong water-tight metal box, which rests on four **Roto legs**, and is set in a shaking motion by a very simple device. It is this motion which causes the movement to the weighing and graining materials. The time required for the graining of each plate is from **25 to 45 minutes**. The machine will be built in **five** different sizes, the **smallest** to grain a plate 20" x 25".

The handling of the **Roto Graining Machine** is **extraordinarily** simple, and can easily be operated by the plate maker or his assistant. Every offset printer who has a Photo Department should **own** this **graining machine**; remember, a **freshly** grained plate will print with less trouble than a **stale** plate.

PROTALBIN

Protalbin is a synthetic sensitizer with properties which fulfill the desire of every platemaker. **Research and tests** in a photolitho house produced an organic material which, either in combination with albumen or not, produces a printing plate of a **durability never** known before.

A means of **greater certainty** has been found to **silence** the doleful words of the pressmen that the image on the plate is **walking away**. It is proven that plates made by this method give **greater efficiency, greater economy** than regular albumen solution.

The exposing time under a negative must be **25 to 35% less**, and it has been observed that the printed image has **no affinity** for the water fountain etch. Its self **protective** properties show a **resistance** for acids or salts. **Protalbin** is a complex compound made into a heavy concentrated liquid form. **One quart** will make **one gallon** of sensitizing solution.

Protalbin is sold in quart cans at \$2.00 or 1 gallon cans at \$7.00.

ALBUMEN

This Product is a special **ALBUMEN** for lithographic purposes, made from **dehydrated** whites of eggs. Dried egg **ALBUMEN** is **preferred** since it is easier to handle. It **dissolves** in a short time and will produce a printed image of **greater hardness**, assuring plates of **long runs**. When mixed with **AMMONIUM BICHROMATE**, dried, and **exposed** to light, it becomes **insoluble** in water; the printed image has **great affinity** for ink, and if properly handled will not become so easily **spongy** or become **gray** in printing.

Sold in 1 lb. cans at \$1.50 per lb.; 5 lb. cans at \$1.35 per lb.; 10 lb. cans at \$1.25 per lb.; 25 lb. cans at \$1.10 per lb.

ASPHOLIN

ASPHOLIN is a scientifically prepared wash out solution, which **assists** in **firmly** holding the printing image to the plate.

Its action causes an **intensification** of the printed surface, and makes the plate more **durable** for **deep etch** as well as for **planographic** use.

ASPHOLIN is packed in quart cans at \$1.00 per quart and in gallon cans at \$3.00 per gallon.

IODANOL

(Reg. U. S. Pat. Off.)

Iodanol is used in place of the relatively expensive **Potassium Iodide**. It is very economical as 1 lb. Iodanol replaces 3 lbs. Potassium Iodide.

Formula for concentrated Iodine stock solution:

Iodanol 1 oz.

Iodine resubl. . . 2 oz.

Put both together in 5 oz. Water. Let solution stay for a few minutes, then add 5 oz. Water. For use, take one part stock solution and 5 to 10 parts of water.

Iodanol is packed in containers of 1 lb. at \$1.50. Larger quantities at special price.

O. P. LIQUID DEVELOPING INK

For developing of photo-litho plates, this ink develops **sharp** and **solid**, without smutting or smearing and will not grease the plate.

It protects the work against the **action** of **etches**, picks up ink more perfectly, and will roll up sharp in the halftones.

Liquid O. P. Developing Ink will not dry; plates can be stored away for later use.

Sold in pint cans at \$1.00; quart cans at \$1.75 per quart or \$7.00 for 1 gallon.

EMULSION

This wonderful preparation is a product of long research and tests in a photo litho house and is now used with remarkable success.

It is particularly advantageous not only on Zinc and Aluminum plates but for printing on stone as well, especially by long exposures in a photo composing machine.

By adding 1 oz. Emulsion to 64 oz. Albumen—Bichromate of Ammonia solution it will form within the printed Albumen image a protective film which is resistant to penetration of etches. It increases the speed of printing, produces perfect development of halftones; the developing ink will hold better, and photo litho plates stand much longer runs in the offset or direct press.

Emulsion is economical: it preserves the Albumen Bichromate solution against atmospheric or climatic conditions, and if kept in the dark will keep for weeks.

Emulsion must be tried to see just what remarkable results are obtained.

Emulsion is sold in Quart cans @ \$2.00
or 1 Gallon @ \$7.00.

O. P. ETCHING SALT

A NON-POISONOUS compound for etching zinc and aluminum plates, contains no **free acid**, and does **not injure** the finest lines of tints.

Transfer plates are made in the usual manner. Plates made on a photo composing machine or in the printing frame, developed with developing ink, can be etched **immediately** with O. P. Etch Salt.

The solution is applied with a soft sponge or etching brush allowed to act for two or three minutes. Spread etch all over the plate, rubbing lightly with piece of felt similar to developing motion, then smooth down with soft cloth and dry, thus producing a chemical change of the surface, which will retain moisture and repel ink.

Plates etched with O. P. Etch Salt have proven to run **cleaner** and give **longer runs** in the press.

In the **water fountain** for offset or direct presses it will keep the plates **free** from scum. **Atmospheric** or **climatic** conditions have **no effect** whatever.

O. P. Etch Salt is **harmless** to the skin and can be handled **without** harmful after effects.

O. P. Etch Salt is packed in 1 lb. containers and is sold @ \$1.50 per lb. One lb. makes **5 gallons** of solution.

O. P. NEGATIVE LACQUER

This Lacquer is a scientifically prepared product for the protection of photographic plates, film negatives or positives. The coating which is formed upon application affords a smooth, transparent film covering which protects against surface scratches, dirt, grit, etc. This covering will also keep the negatives from altering in size, since they are completely protected from atmospheric changes.

Negatives coated with O. P. NEGATIVE LACQUER may be washed with water without affecting underlying opaquing, and will not waterspot. It may be easily applied by spraying, brushing, or flowing, and will dry in a few minutes to a beautiful, transparent coating.

O. P. NEGATIVE LACQUER is sold in quart cans at \$1.50 per quart and in gallon cans at \$5.00 per gallon.

FIXING CEMENT

To patch up the holes and mechanical defects on rubber blankets caused by creased card board, paper, pieces of wood, nails, etc.

Spread or force some FIXING CEMENT into the aperture with a flat knife and just let it dry.

Fixing Cement is sold in tubes at 25c per tube or \$2.50 per dozen in a carton.

BLANKETIN

BLANKETIN is a preparation used as a **Blanket Wash** and as a **preservative** for **offset blankets**; it **dissolves** and **removes** ink without **harming** the rubber. This product has been found to counteract **deleterious** effects, it helps to keep blankets **resilient**, and **corrects swelling**. It helps to keep the rubber in **normal** condition, which **automatically** insures **long** life to the rubber blankets.

It has also been found that the danger of **embossing**, **oxidation**, and the **frequent** changing of blankets is **eliminated** by the use of this product.

Blanketin is sold in quart cans at \$1.00 or \$3.00 per gallon.

FIXOL SWELLING SOLUTION

This product is used as a **make-ready** solution. Its purpose is to **raise** the **hollow spots** on the **back** of rubber blankets, in place of the tissue paper commonly used. Whenever a **hollow spot** appears, apply **FIXOL SWELLING SOLUTION** with a brush, or if a **larger** area is to be covered, apply with a piece of cloth.

The rubber will **swell**, **expand** in thickness, and will **react** more evenly than the unsightly tissue patches now in use. **Raised spots** may be **removed** or **lowered** by rubbing the area with a soft cloth saturated in **Denatured Alcohol**.

FIXOL SWELLING SOLUTION is packed in pint or quart containers at \$1.50 per pint and \$2.50 per quart.

ANTITACK

This preparation is for offset blankets or rubber rollers, to overcome the **tackiness** produced by **soft** inks or **improper** blanket washes. It **replaces** the ill-smelling Carbon Di-Sulphide.

It is known that certain ink and blanket washes have a tendency to penetrate rubber, which cause the rubber to swell and become sticky. A sticky or "tacky" blanket will hold minute particles of paper fibre. With this condition prevalent it is **impossible** to run coated paper, since the paper will stick to the blanket with the tenaciousness of glue. However, a blanket treated with **ANTITACK** will permit the printing of **any** paper **without** the **least** trouble. **ANTITACK**, used on rubber rollers, will preserve the rubber and increase their ink-carrying capacity.

With all these cost-lessening properties, **ANTITACK** is truly an **indispensable** item to the Photo-Lithographer.

ANTITACK is sold in Quart and Gallon glass containers only, at \$1.50 per Quart and \$5.00 per Gallon.

OPALIN

OPALIN is extremely useful in the preparation of plates, **indispensable** for **deep etch**, **Albumen**, and for plates used on long runs.

OPALIN creates a **waterproof**, chemical **preservative** film over the work of the plates. It **protects** the work on the plates **against** the action of **Lithographic solvents**, **etches** and **counteretches**.

A **Transfer** or **Photo plate** is etched, gummed as usual, and dried. Wash out all traces of ink with Turpentine, Benzine or Benzol until the image appears colorless.

Apply **OPALIN** with a soft, clean rag very evenly. **OPALIN** is **intensely colored** to allow an even application. Dry until completely free from stickiness. Next apply washout solution or **ASPHOLIN** in a thin and even coating. Dry and wash off with clean water and start press.

Work running **weak** on press can be **revived** by rubbing up plate with rubbing ink, gum up and dry. Wash out with Benzol or Benzine until all traces of ink are removed, then rub the plate over with **OPALIN**. Dry, wash with clean water and start press.

Opalin is sold in pint and quart containers at \$2.50 per pint and \$4.00 per quart.

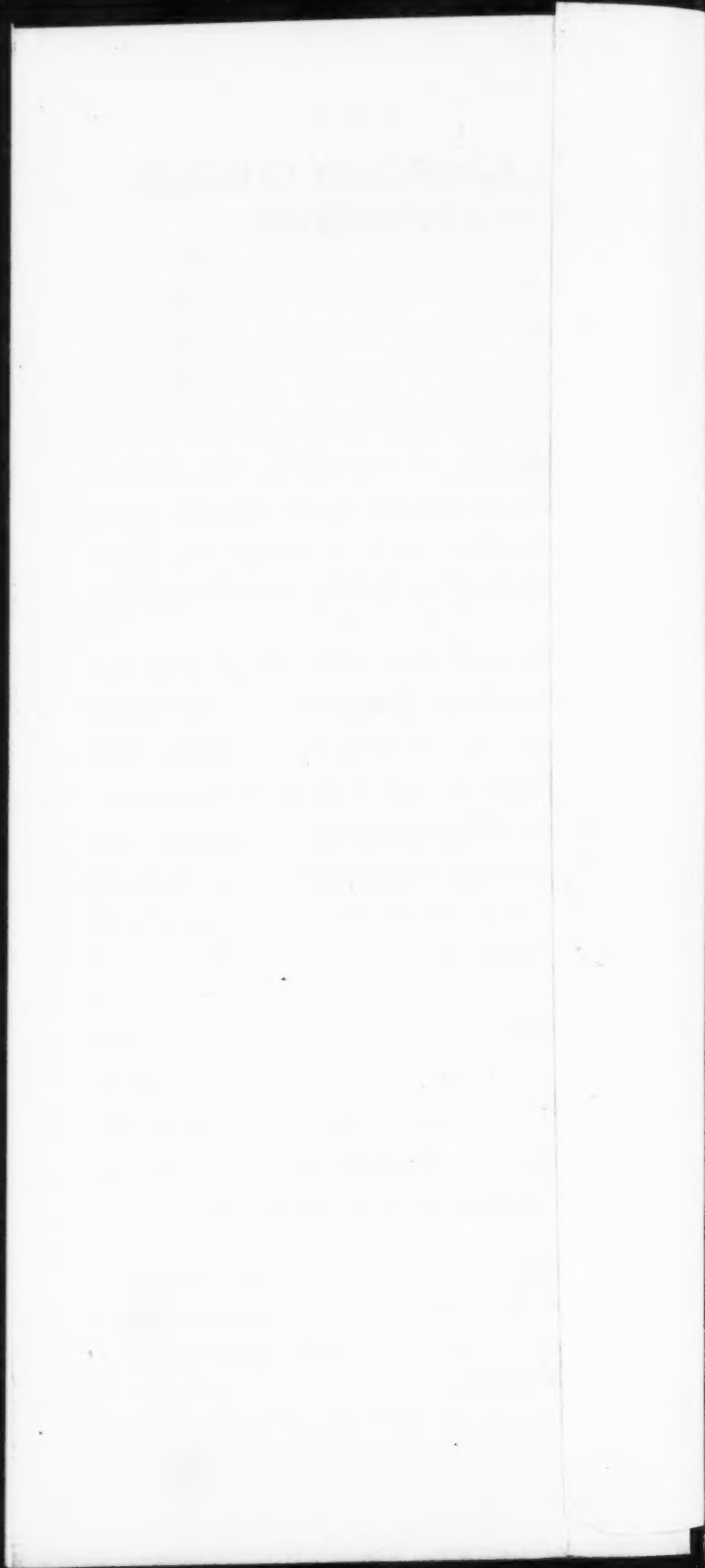
O. P. MERCURY CHROME INTENSIFIER

The method of intensifying with O. P. Mercury Chrome Intensifier fulfills every requirement of a perfect intensifier. It is simple, certain, thoroughly under control, and capable of imparting any degree of intensity desired, from a very slight strengthening up to considerably more than can be given by any other intensifier.

Intensifying with Mercury Chrome imparts increased opaqueness to the image of a wet, dry or emulsion negative, line or halftone. It intensifies most the denser portions of the negatives. Negatives can be intensified to the maximum of density with no fear of cracking or staining with one or more dips.

Mercury Chrome is made in powder form, dissolves very easily in a small amount of water to make a concentrated stock solution. Blackening is done with Sodium Sulphide or Sodium Sulphite.

Mercury Chrome is packed in 1 lb. containers @ \$2.00 per lb. 1 lb. makes 3 to 4 gallons of solution. Larger quantities at special prices.



OFFSET BLACK



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phenomenal*

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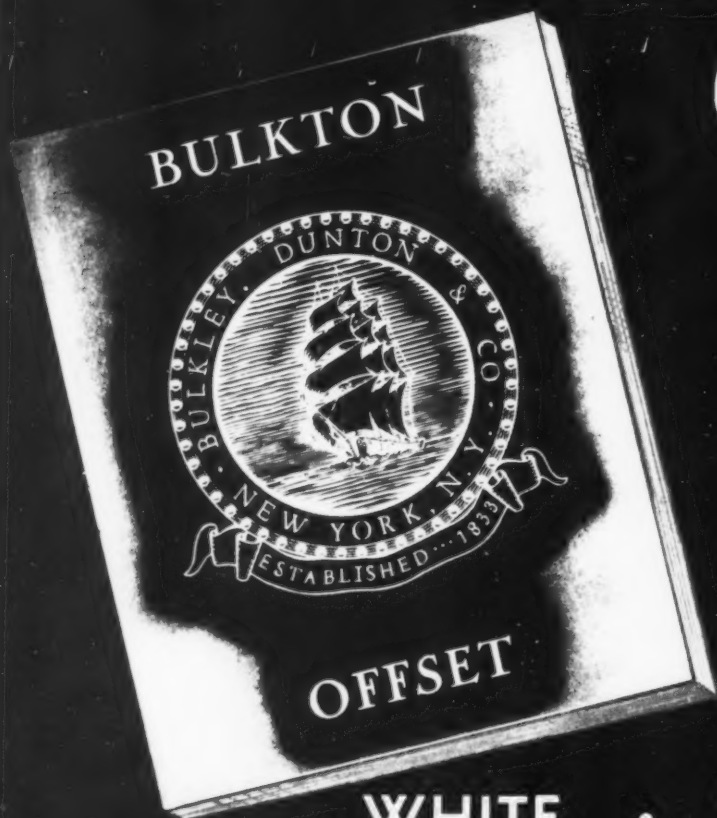
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